

SUNDAY, MAY 22nd

13:00-21:00 **Registration desk open**

Room Terpsichore (B)

14:00 **IAEF delegates Meeting**

Room Terpsichore

18:00 **Congress Opening**
IAEF & ICEF11 President Address
G.D. Saravacos
Welcoming Addresses by Officials

18:30 **Plenary Lecture**
Food process engineering research and innovation in a fast changing world
H. Schubert, H.P. Schuchmann
Karlsruhe Institute of Technology (KIT), Institute of Engineering in Life Sciences, Germany

19:00 **Plenary Lecture**
Food process engineering and product innovation in a changing world - The industry perspective
J.P. Clark
Consultant to the Process Industries, USA

19:30 **IAEF Life Achievement Awards Ceremony**

20:30 **WELCOME RECEPTION**

MONDAY, MAY 23rd

08:00-19:00

Registration desk open

MONDAY, MAY 23rd 08:15-10:30

MONDAY, MAY 23rd

8:15-10:30

Session 1: Micro- and nano- sciences and technology -I-

FMS 1

Room Terpsichore (A)

Chairs: J.L. Kokini, H. Yoshii

- 08:15** Advances in nanotechnology as applied to food systems (FMS1107) Pp5
J.L. Kokini
University of Illinois, USA
- 08:45** Molecular encapsulation of citral or d-limonene flavor by spray drying (FMS577) Pp7
C. Yamamoto^a, T. Furuta^b, T. Loon Neoh^c, H. Yoshii^c
^aUnited Graduate School of Agricultural Sciences, Ehime University, Japan, ^bDepartment of Biotechnology, Tottori University, Japan, ^cDepartment of Applied Biological Science, Kagawa University, Japan
- 09:00** Modelling of plant tissue microstructure for finite element method (FMS301) Pp9
P. Mariusz Pieczywek^a, A. Zdunek^a, M. Umeda^b
^aDepartment of Microstructure and Mechanics of Biomaterials, Institute of Agrophysics, Poland, ^bLaboratory of Field Robotics, Division of Environmental Science and Technology, Japan
- 09:15** Preparation of protein particles for high protein foods using two-step emulsification (FMS348) Pp11
D. Sağlam^{a,b}, P. Venema^{a,b}, R. de Vries^{b,c}, L.M.C. Sagis^a, E. Van Derlinden^a
^aDepartment of Agrotechnology and Food Sciences, Wageningen University, The Netherlands, ^bTop Institute Food & Nutrition, The Netherlands, ^cLaboratory of Physical Chemistry and Colloid Science, The Netherlands
- 09:30** Casein micelles on silicon micro-sieves studied by atomic force microscopy and light scattering (FMS487) Pp13
R. Gebhardt^a, W. Holzmüller^a, Q. Zhong^b, P. Müller-Buschbaum^b, U. Kulozik^{a,c}
^aTechnische Universität München, Chair for Food Process Engineering and Dairy Technology, Germany, ^bTechnische Universität München, Physik-Department E13, Germany, ^cZIEL Center of Nutrition and Food Research, Technology Section, Technische Universität München, Germany
- 09:45** Tracing changes of garlic bulbs stored at low temperature by MRI (FMS630) Pp15
N. Ishida^a, E. Niwata^b, H. Yamazaki^c
^aFaculty of Bioresources and Environmental Science, Ishikawa Prefectural University, Japan, ^bInstitute of Vegetable Research, Aomori Prefectural Industry Research Center, Japan, ^cNational Agricultural Research Center for Tohoku Region, National Agriculture and Food Research Organization (NARO), Japan
- 10:00** Developing nano-sized vehicles based on tailored polysaccharides produced by enzymatic synthesis (FMS697) Pp17
D. Semyonov, E. Shimoni
Faculty of Biotechnology and Food Engineering, Technion, Israel Institute of Technology, Israel
- 10:15** Encapsulation of beta-carotene in solid lipid microparticles of stearic acid: evaluation of stability and microstructural aspects (FMS95) Pp19
G.V.L. Gomes^a, T.R. Borrin^a, I.A.S. Simplicio^a, J.C.G. Tedesco^b, L.P. Cardoso^b, S.C. Pinho^a
^aDepartment of Food Engineering, University of Sao Paulo (USP), Brazil, ^bDepartment of Applied Physics, Institute of Physics "Gleb Wataghin", State University of Campinas (UNICAMP), Brazil

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Session 2: Mechanical properties of foods

EPF 1

Room Terpsichore (B)

Chairs: J. Blahovec, H.P. Schuchmann, N. Zogzas

- 08:15 Developing novel 3D measurement techniques and prediction method for food density determination (EPF1120) Pp187**
S. Kelkar^a, S. Stella^a, C. Boushey^b, **M. Okos^a**
^aAgricultural & Biological Engineering, Purdue University, USA, ^bDepartment of Foods & Nutrition, Purdue University, USA
- 08:30 A composite model for wheat flour dough under large deformation (EPF351) Pp189**
M.A.P. Mohammed, E. Tarleton, M.N. Charalambides, J.G. Williams
Mechanical Engineering Department, Imperial College London, UK
- 08:45 Modelling deformation and fracture in confectionery wafers (EPF363) Pp191**
I.K. Mohammed^a, **M.N. Charalambides^a**, J.G. Williams^a, J. Rasburn^b
^aMechanical Engineering Department, Imperial College London, UK, ^bNestec York Ltd., Nestlé Product Technology Centre, UK
- 09:00 Mechanical properties and microstructural changes during soaking of individual corn and quinoa breakfast flakes (EPF607) Pp193**
W.T. Medina^{a,d}, A.A. de la Llera^b, J.L. Condori^c, J.M. Aguilera^a
^aPontificia Universidad Católica de Chile, Chile, ^bSchool of Engineering and Applied Sciences, Harvard University, USA, ^cEl Altiplano SAC Company, Peru, ^dSchool of Agroindustries, Universidad Nacional del Altiplano de Puno, Peru
- 09:15 Dimensional analysis of continuous foaming operation by whipping (EPF685) Pp195**
G. Mary^{a,b}, S. Mezdour^{a,b}, R. Lauhon^{a,b}, G. Cuvelier^{a,b}, F. Ducept^{a,b}
^aAgroParisTech - Ingénierie Procédés Aliments, France, ^bINRA - Ingénierie Procédés Aliments, France
- 09:30 Supplementation of extruded foams with wheat bran: Effect on textural properties (EPF176) Pp197**
F. Robin^{a,b}, C. Dubois^a, H.P. Schuchmann^b, S. Palzer^c
^aNestlé Research Center, Switzerland, ^bKarlsruhe Institute of Technology, Germany, ^cNestlé Product Technology Centre, UK
- 09:45 Impact of steaming conditions on the structure and on the properties of bread crust; in the case of a crispy roll (FMS780) Pp199**
A. Le-Bail^{a,b,c}, R. Del Carmen Altamirano Fortoul^d, T. Dessev^e, C. Rosell^d, D. Leray^f, T. Lucas^g, S. Chevallier^{a,b,c}, **V. Jury^{a,b,c}**
^aONIRIS, UMR 6144 GEPEA CNRS, France, ^bCNRS, Nantes, France, ^cLUNAM Université Nantes Angers Le Mans, France, ^dInstitute of Agrochemistry and Food Technology, CSIC Spain, ^eDpt. by Technology of Grain, Fodder, Bread and Confectionery Products, University of Food Technologies, Bulgaria, ^fCEMAGREF, Food Process Engineering Research Unit, France
- 10:00 Effect of processing on rheological, structural and sensory properties of apple puree (EPF785) Pp201**
L. Espinosa^{a,b}, N. To^{a,b}, R. Symoneaux^c, C.M.G.C. Renard^d, N. Biau^e, G. Cuvelier^{a,b}
^aAgroParisTech, Ingénierie Procédés Aliments, France, ^bINRA, Ingénierie Procédés Aliments, France, ^cLaboratoire GRAPPE-ESA, France, ^dSécurité et Qualité des Produits d'Origine Végétale, INRA, Université d'Avignon et des Pays du Vaucluse, France, ^eConserves France, Domaine du Grand Frigolet, France
- 10:15 Potential application of pre-processed whey protein isolate (WPI) for high protein food (EPF130) Pp203**
N. Purwanti^{a,b}, A. Moerkens^b, A. Jan van der Goot^{b,a}, R. Boom^b
^aTop Institute Food and Nutrition, Netherlands, ^bFood Process Engineering, Wageningen University, Netherlands

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Session 3: Modeling and simulation -I-

MCF 1

Room Erato

Chairs: H.S. Ramaswamy, P. Masi

8:15 **Evaluation of heat transfer coefficients associated with thermal processing systems employed for commercial sterilization (MCF1194) Pp261**

H.S. Ramaswamy

Department of Food Science and Agricultural Chemistry, Macdonald Campus of McGill University, Canada

8:45 **Optimal shape design of bypass holding tubes configuration in aseptic processing (MCF792) Pp263**

F. Sarghini^a, A. Silano^b, P. Masi^b

^aUniversity of Naples Federico II – DIIAT, Italy, ^bUniversity of Naples Federico II – CAISIAL, Italy

9:00 **Study of laminar mixing in kenics static mixer by using positron emission particle tracking (PEPT) (MCF656) Pp265**

M. Rafiee, S. Bakalis, P.J. Fryer, A. Ingram

School of Chemical Engineering, University of Birmingham, UK

9:15 **Quality degradation of lactic acid bacteria during the freeze drying process: Experimental study and mathematical modelling (MCF474) Pp267**

S. Passot, F. Fonseca, S. Cenard, I. Douania, I.C. Tréléa

UMR782 Génie et Microbiologie des Procédés Alimentaires, AgroParisTech, INRA, France

9:30 **Computer aided simulation for developing a simple model to predict cooling of packaged foods (MCF378) Pp269**

M. Gram Christensen, A. Heilu Fayissa, J. Adler-Nissen

National Food Institute, DTU, Denmark

9:45 **Prediction of quality properties of dried cranberries with combination method of ultrasound-osmotic-microwave using artificial neural networks model (FMS1185) Pp271**

S. Shamaei, Z. Emam-Djomeh

Transfer Phenomena Laboratory (TPL), Faculty of Agricultural Engineering and Technology, University of Tehran, Iran

10:00 **Simulation of coating process and validation in actual system: Application of artificial neural network and development of a system analytical model (MCF245) Pp273**

S. Mukherjee, S. Bhattacharya

Food Engineering Department, Central Food Technological Research Institute (Council of Scientific and Industrial Research), India

10:15 **Drying of spherical food materials: mathematical modeling including stress fields (MCF491) Pp275**

M. Carvalho, D.J. Mazzini Sartori, L. da Silva Arrieche

Engineering and Computation Department, Federal University Of Espírito Santo, Brazil

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Session 4: Emerging technologies -I-

NFP 1

Room Hesperides

Chairs: V.M. Balasubramaniam, V. Heinz, C. Mallidis

- 08:15 Combined pressure-thermal effects on food and biomaterials (NFP1241) Pp345**
V.M. (Bala) Balasubramaniam
Department of Food Science and Technology, Department of Food Agricultural and Biological Engineering, USA
- 08:45 Pulsed Electric Field food treatment - scale up from lab to industrial scale (NFP268) Pp347**
S. Toepfl
DIL German Institute of Food Technologies, Germany
- 09:00 Pulsed Electric Fields – assisted vinification (NFP324) Pp349**
F. Donsi^a, G. Ferrari^{a,b}, M. Frullo^b, G. Pataro^a
^aDepartment of Industrial Engineering, University of Salerno, Italy, ^bProdAI Scarl, Italy
- 09:15 High pressure and pulsed electric field pasteurisation of orange juice:evaluation of the substantial equivalence to conventional heat pasteurisation (NFP646) Pp351**
L. Vervoort, I. Van der Plancken, T. Grauwet, M. Hendrickx, A. Van Loey
Laboratory of Food Technology and Leuven Food Science and Nutrition Research Center (LFoRCe), Department of Microbial and Molecular Systems (M²S), Katholieke Universiteit Leuven, Belgium
- 09:30 Factors affecting microbial inactivation by Pulsed Light in a continuous flow-through unit for liquid products treatment (NFP745) Pp353**
A. Lasagabaster, M.L. Artíguez, I. Martínez de Marañón
AZTI-Tecnalia, Food Research Division, Spain
- 09:45 The different pathways of spore germination and inactivation of *Bacillus subtilis* under high pressure and elevated temperatures (NFP811) Pp355**
K. Reineke^a, I. Doehner^a, D. Baier^a, A. Mathys^{a,b}, D. Knorr^a
^aDepartment of Food Biotechnology and Food Process Engineering, Technische Universität Berlin, Germany, ^bFood Science & Technology Department, Nestlé Research Center, Switzerland
- 10:00 Identification of different physiological states of bacterial spores and distinction from vegetative cells after high pressure treatments via flow cytometry (NFP852) Pp357**
D. Baier^a, A. Mathys^{a,b}, D. Knorr^a
^aDepartment of Food Biotechnology and Process Engineering, Technische Universität Berlin, Germany, ^bFood Science & Technology Department, Bioprocessing Group, Nestlé Research Center, Switzerland
- 10:15 Quality evaluation of slightly concentrated tomato juice produced under high pressure conditions (NFP1184) Pp359**
S. Boulekou^a, C. Mallidis^b, P.S. Taoukis^c, N.G. Stoforos^d
^aD. Nomikos S.A., Greece, ^bInstitute of Technology of Agricultural Products, National Foundation of Agricultural Research, Greece, ^cNational Technical University of Athens, Greece, ^dAgricultural University of Athens, Greece

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Session 5: New technologies for the evaluation of quality and safety MFS 1
Room Santorini

Chairs: D.W. Sun, H.K. Purwadaria, J.M. Frias

08:15 Hyperspectral Imaging Technology: A non-destructive tool for food quality and safety evaluation and inspection (MFS1281) Pp447

D.-W. Sun

Food Refrigeration & Computerised Food Technology, University College Dublin, National University of Ireland, Ireland

08:45 Novel NMR - Technology to assess food quality and safety (MFS311) Pp449

M. Spraul^a, H. Schäfer^b, B. Schütz^b, F. Fang^b, M. Link^c

^aNMR Application and Applied Method Development, Bruker BioSpin GmbH, Germany, ^bNMR Applied Method Development, Bruker BioSpin GmbH, Germany, ^cBusiness Development, Bruker BioSpin GmbH, Germany

09:00 Long-range correlations in pork ham surface images using first-order detrended fluctuation analysis (MFS32) Pp451

N.A. Valous^a, K. Drakakis^b, D.-W. Sun^a

^aFRCT Group, Biosystems Engineering, Agriculture and Food Science Centre, University College Dublin, Ireland, ^bComplex and Adaptive Systems Laboratory (CASL), University College Dublin, Ireland

09:15 Evaluation and identification of markers of postharvest damage in mushrooms (*Agaricus bisporus*) using a GC/MS metabolomic approach (MFS564) Pp453

A. O'Gorman, C. Barry-Ryan, J.M. Frias

School of Food Science & Environmental Health, Dublin Institution of Technology, Ireland

09:30 Visualization of the distribution of multiple constituents in bread dough by use of Fluorescence Fingerprint Imaging (MFS641) Pp455

M. Kokawa^{a,b}, K. Fujita^b, J. Sugiyama^b, M. Tsuta^b, M. Shibata^b, T. Araki^a, H. Nabetani^{a,b}

^aThe University of Tokyo, Japan, ^bNational Food Institute, Japan

09:45 Non-destructive nutrient determination of maize using NIR method (MFS864) Pp457

I.W. Budiastara^a, H. Andrianyta^b, H.K. Purwadaria^a

^aDepartment of Mechanical and Biosystem Engineering, Bogor Agricultural University (IPB), Indonesia, ^bIndonesian Agency for Agricultural Research and Development, Ministry of Agriculture, Indonesia

10:00 Establishment fingerprint of flavor components for typical chinese rice wine (MFS270) Pp459

D. Liu, P. Zhu, J. Tang

Zhejiang University, China

10:15 Rapid assessment of meat quality by means of an electronic nose and support vector machines (MFS169) Pp461

O.S. Papadopoulou^{a,b}, C.C. Tassou^b, L. Schiavo^c, G.-J.E. Nychas^a, E.Z. Panagou^a

^aDepartment of Food Science and Technology, Agricultural University of Athens, Greece, ^bNational Agricultural Research Foundation, Institute of Technology of Agricultural Products, Greece, ^cBiological Division, Technobiochip ScaRL, Italy

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10:30-11:30

Coffee Break

MONDAY, MAY 23rd 11:30-13:30

MONDAY, MAY 23rd

11:30-13:30

Session 1 : Automation, process control, intelligent systems & sensors MCF 2
Room Terpsichore (A)

Chairs: M.J. McCarthy, P.J. Cullen, C.P. O'Donnell

- 11:30 **Advanced sensors, quality attributes and modeling in food process control (MCF13) Pp277**
M.J. McCarthy, K.L. McCarthy
Department of Food Science and Technology, University of California, USA
- 12:00 **The automatic sorting using image processing improves postharvest blueberries storage quality (MCF1095) Pp279**
G. Leiva^a, G. Mondragón^b, D. Mery^b, J.M. Aguilera^a
^aDepartment of Chemical and Bioprocess Engineering, Pontifical Catholic University of Chile, Chile, ^bGroup of images, Department of Computer Science, Pontifical Catholic University of Chile, Chile
- 12:15 **Optimal on-line decision making for food thermal processes (MCF209) Pp281**
A. Arias-Mendez^a, E. Balsa-Canto^a, M.R. Garcia^b, J.I. Molina^a, C. Vilas^a, M. Villafin^a, A.A. Alonso^a
^aProcess Engineering Group, IIM-CSIC, Spain, ^bHamilton Institute, National University of Ireland, Ireland
- 12:30 **Prediction of water content of baking powder using near-infrared spectroscopy (MCF64) Pp283**
T. Yano, J. Kohda, Y. Nakano
Department of Information Sciences, Hiroshima City University, Japan
- 12:45 **Hyperspectral imaging for the detection of microbial spoilage of mushrooms (MCF1004) Pp285**
E. Gaston^{a,b}, J.M. Frías^a, P.J. Cullen^a, C.P. O'Connell^c, A.A. Gowen^{c,d}
^aSchool of Food Science and Environmental Health, Dublin Institute of Technology, Ireland, ^bAgrofood group, Innovació i Recerca Industrial i Sostenible, Spain, ^cBiosystems Engineering, School of Agriculture, Food Science and Veterinary Medicine, University College Dublin, Dublin, Ireland, ^dKobe University, Japan
- 13:00 **Detection of chicken egg fertility and early embryo development using hyperspectral imaging (MCF894) Pp287**
L. Liu, M.O. Ngadi
Department of Bioresource Engineering, McGill University, Canada
- 13:15 **Automated detection of softening and hard columella in kiwifruits during postharvest using X-ray testing (MCF1097) Pp289**
G. Mondragón^a, G. Leiva^b, J.M. Aguilera^b, D. Mery^a
^aDepartment of Computer Science, Pontifical Catholic University of Chile, Chile, ^bDepartment of Chemical and Bioprocess Engineering, Pontifical Catholic University of Chile, Chile

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MONDAY, MAY 23rd

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Session 2: Food properties

EPF 2

Room Terpsichore (B)

Chairs: M. Stieger, M.D. Hubinger, Z. Maroulis

- 11:30 Effect of temperature on the density of whole milk under high pressure (EPF187) Pp205**
B. Guignon, I. Rey, P.D. Sanz
MALTA Consolider Team, Department of Processes, Food Science Technology and Nutrition Institute (ICTAN-CSIC), Spain
- 11:45 Texture-taste interactions: Enhancement of taste intensity by structural modifications of the food matrix (EPF55) Pp207**
M. Stieger^{a,b}
^aTJ Food & Nutrition, The Netherlands, ^bAgrotechnology & Food Sciences Group, Wageningen University, The Netherlands
- 12:00 Decomposition of absorption spectra of multi-layered biological materials by spatially-resolved spectroscopy and parallel factor analysis (EPF223) Pp209**
M. Tsuta^{a,b}, N. Nguyen Do Trong^a, E. Herremans^a, J. De Baerdemaeker^a, W. Saeys^a
^aBIOSYST-MeBioS K.U.Leuven, Belgium, ^bNational Food Research Institute, Japan
- 12:15 Correlating Mozzarella cheese properties to production processes by rheological, mechanical and microstructure study: Meltability study and activation energy (EPF1248) Pp211**
X.-X. Ma^a, B. James^a, L. Zhang^b, E. Emanuelsson-Patterson^a
^aDepartment of Chemical and Materials Engineering, University of Auckland, New Zealand, ^bResearch Centre, Fonterra Co-operative Group Limited, New Zealand
- 12:30 Comparison of nutritional composition between palm kernel fiber and the effect of the supercritical fluid extraction on its quality (EPF681) Pp213**
M.M. Ben Nama^a, N.N. Ab. Rahman^a, S.S. Al-Rawi^b, A.H. Ibrahim^c, M.O. Ab Kadir^b, A.M.S. Abdul Majid^c
^aDepartment of Biology, Universiti Sains Malaysia, Malaysia, ^bDepartment of Environmental Technology, Universiti Sains Malaysia, Malaysia, ^cDepartment of Pharmacology, Universiti Sains Malaysia, Malaysia
- 12:45 Practical implications of probe- and sample- related variables in puncture testing of clingstone peaches (EPF536) Pp215**
R.R. Milczarek, T.H. McHugh
United States Department of Agriculture, Agricultural Research Service, USA
- 13:00 Inflammatory properties of almond milk fermented with potentially probiotic bacteria (FPE695) Pp217**
N. Bernat^a, M. Chafer^a, A. Chiralt^a, Y. Sanz^b, C. Gonzalez-Martinez^a, J.M. Laparra^b
^aInstituto de Ingeniería de Alimentos para el Desarrollo. Universidad Politécnica de Valencia, Spain, ^bAgrochemistry and Food Technology Institute (IATA-CSIC), Microbial Ecophysiology and Nutrition Laboratory, Spain
- 13:15 Structural changes of gliadins during sourdough fermentation (FPE476) Pp219**
G. Komen, A.H. Baysal, S. Harsa
Izmir Institute of Technology, Turkey

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Session 3: Cooling and freezing

AFT 1

Room Erato

Chairs: Y.-C. Hung, G. Alvarez, M. Giannakourou

11:30 Improving the design and efficiency of the forced-air cooling process of fresh strawberries using computational modelling (AFT203) Pp513

M.J. Ferrua^a, R.P. Singh^b

^aRiddet Institute, Massey University, New Zealand, ^bDepartment of Biological and Agricultural Engineering, University of California, USA

11:45 Preservation of cell viability in fruit and vegetable tissues after freezing and thawing (AFT81) Pp515

F. Gómez Galindo^a, P. Dejmek^a, P.Y. Phoon^b, E. Velickova^c, U. Tylewicz^d

^aFood Technology, Engineering and Nutrition, Lund University, Sweden, ^bFood Science, Purdue University, USA, ^cFood Technology and Biotechnology, University SS, Cyril and Methodius, FY Republic of Macedonia, ^dFood Science, University of Bologna, Italy

12:00 Modelling and validation of robust partial thawing of frozen convenience foods during distribution in the cold chain (AFT634) Pp517

J. Adler-Nissen, G. Ørnholt Zammit

Division of Industrial Food Research, Technical University of Denmark, Denmark

12:15 Cryotropic gel formation for food nutrients encapsulation - A controllable processing of hydrogel by freezing (AFT813) Pp519

K. Nakagawa^a, N. Nishimoto^a, N. Sowasod^b, T. Charinpanitkul^c, A. Soottitantawat^c, W. Tanthapanichakoon^c

^aResearch Centre for Nano-Micro Science and Engineering, University of Hyogo, Japan, ^bNanoscience and Technology Program, Chulalongkorn University, Thailand, ^cCenter of Excellence in Particle Technology, Chulalongkorn University, Thailand

12:30 Ultrasound assisted nucleation of water during freezing (AFT400) Pp521

H. Kiani, Z. Zhang, A. Delgado, D.-W. Sun

FRCFT, University College Dublin, Ireland

12:45 Online ice crystal size measurements by the focused beam reflectance method (FBRM) during sorbet freezing (AFT221) Pp523

M. Arellano^{a,b}, J.E. Gonzalez^{a,b}, G. Alvarez^a, H. Benkhelifa^b, D. Flick^b, D. Leducq^a

^aCemagref, UR Génie des Procédés Frigorifiques, France, ^bAgroParisTech, UMR N°1145 Ingénierie Procédés Aliments, France

13:00 Recrystallization behavior of ice crystals in sucrose solution in the presence of AFP Type I (AFT1270) Pp525

T. Hagiwara, E. Ohmoto, K. Tokizawa, T. Sakiyama

Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

13:15 Super-cooling phenomena in fruits, vegetables and seafoods (AFT658) Pp527

C. James, S.J. James

Food Refrigeration and Process Engineering Research Centre (FRPERC), The Grimsby Institute of Further & Higher Education (GIFHE), UK

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Session 4: High Pressure Processing

NFP 2

Room Hesperides

Chairs: M. Hendrickx, M.V. Karwe

11:30 High pressure high temperature processing of plant based food systems: Mechanisms and kinetics (NFP285) Pp361

M. Hendrickx

Laboratory of Food Technology, Leuven Food Science and Nutrition Research Centre, Katholieke Universiteit Leuven, Belgium

12:00 Pressure and temperature non uniformity during high pressure processing (HPP) of foods (NFP1291) Pp363

M.V. Karwe, A. Cuitino, M. Khurana, Y. Miyazawa, J.A. Maldonado

Rutgers University, US

12:30 Industrial high pressure processing of foods: Review of evolution and emerging trends (NFP1295) Pp365

F. Purroy, C. Tonello

NC Hyperbaric SA, Spain

12:45 Illustrating temperature uniformity in high pressure high temperature reactors using temperature sensitive indicators (NFP151) Pp367

T. Grauwet^a, I. Van der Plancken^a, L. Vervoort^a, A. Matser^b, M. Hendrickx^a, A. Van Loey^a

^aLaboratory of Food Technology, Leuven Food Science and Nutrition Research Centre, Katholieke Universiteit Leuven, Belgium, ^bWageningen UR Food & Biobased Research, The Netherlands

13:00 Bioconversion of glutamic acid to gamma-aminobutyric acid in soybean by high pressure with precursor feeding (NFP419) Pp369

S. Ueno^a, T. Katayama^a, T. Watanabe^b, K. Nakajima^b, M. Hayashi^b, T. Shigematsu^b, T. Fujii^{a,b}

^aInnovative Research Center for Agricultural Sciences, Tohoku University, Japan, ^bDepartment of Food Science, Niigata University of Pharmacy and Applied Life Sciences, Japan

13:15 The effect of the high hydrostatic pressure on polyphenols and anthocyanins in red fruit products (NFP67) Pp371

G. Ferrari^{a,b}, P. Maresca^b, R. Ciccarone^b

^aDepartment of Industrial Engineering, University of Salerno, Italy, ^bProdAl Scarl, University of Salerno, Italy

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Session 5: Novel foods and ingredients

FPE 1

Room Santorini

Chairs: B. Mckenna, R.H. Mascheroni, V. Oreopoulou

11:30 Future developments in food process engineering and functional foods (NFP930) Pp605

B. Mckenna

University College Dublin, Ireland

12:00 Impact of traditional and innovative technologies on some characteristics and bioactive compounds of *Opuntia macrorhiza* juice (FPE1105) Pp607

T.E. Moussa-Ayoub^a, H. Jaeger^a, D. Knorr^a, S. El-Samahy^b, S. Rohn^c, L.W. Kroh^a

^aDepartment of Food Chemistry and Analysis, Institute of Food Technology and Food Chemistry, Technical University of Berlin, Germany, ^bFood Technology Department, Agriculture Faculty, Suez Canal University, Egypt, ^cDepartment of Food Chemistry and Analysis, Institute of Food Chemistry, University of Hamburg, Germany

12:15 The effects of trans fatty acid alternatives on the sensory acceptability, mechanical texture, and shelf life of bar type components (FPE1000) Pp609

M.J. Richardson, S. Walker

Natick, MA, USA

12:30 Designing food structure to enhance taste intensity (FPE172) Pp611

A.C. Mosca^{a,b}, F. van de Velde^{a,c}, J.H.F. Bult^{a,c}, M. Stieger^{a,b}

^aTi Food & Nutrition, The Netherlands, ^bAgrotechnology and Food Sciences Group, Wageningen University and Research Centre, The Netherlands, ^cNIZO food research, The Netherlands

12:45 Optimization of osmotic dehydration as a preliminary step for the development of a drying treatment on kiwifruit (*Actinidia Chinensis* P.) (FPE982) Pp613

A. Rodríguez^a, A.R. Bambicha^a, R.H. Mascheroni^{a,b}

^aCIDCA (CONICET La Plata- UNLP), Argentina, ^bMODIAL - Departamento de Ingeniería Química - Facultad de Ingeniería, UNLP, Argentina

13:00 Peptide conformational requirements for antifreeze activity (FPE1121) Pp615

P.A. Carvajal-Rondanelli^{a,c}, F. Guzman^{b,d}, F. Cardenas^a, S.H. Marshall^{b,c,d}

^aEscuela de Alimentos, Pontificia Universidad Católica de Valparaíso PUCV, Chile, ^bInstituto de Biología, Laboratorio de Genética e Inmunología Molecular, PUCV, Chile, ^cCentro Regional de Alimentos Saludables CREAS, Chile, ^dNúcleo Biotecnología Curauma NBC, Chile

13:15 Processing of low polyphenol protein isolates from residues of sunflower seed oil production (FPE555) Pp617

C. Pickardt^{a,b}, G.M. Weisz^b, P. Eisner^a, D. Kammerer^b, S. Neidhart^b, R. Carle^b

^aFraunhofer Institute for Process Engineering and Packaging (IVV), Germany, ^bInstitute of Food Science and Biotechnology, Hohenheim University, Germany

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13:30-15:00

Lunch Break

MONDAY, MAY 23rd 15:00-17:00

MONDAY, MAY 23rd

15:00-17:00

Session 1: Food polymers

FMS 2

Room Terpsichore (A)

Chairs: C.G. Billiaderis, P.J. do Amaral Sobral

15:00 Molecular origin of physical state and functionality of soluble cereal fibers (FMS709)

Pp33

C.G. Billiaderis

Department of Food Science and Technology, School of Agriculture, Aristotle University of Thessaloniki, Greece

15:30 Effect of sugars on the phase behaviour, flow and interfacial properties of protein-polysaccharide aqueous two phase systems (FMS1071) Pp35

A. Portschi, F. Spyropoulos, I. Norton

Department of Chemical Engineering, University of Birmingham, UK

15:45 Properties of film-forming solutions and their films made by spreading: effect of gelatine concentration (FMS181) Pp37

M.F. Coronado Jorge, F.M. Vanin, R. Aparecida de Carvalho, I.C. Freitas Moraes, A.M.

Quinta Barbosa Bittante, P.J. do Amaral Sobral

Food Engineering Department, FZEA - University of São Paulo, Brazil

16:00 Thermomechanical properties of vegetable tissue at 30-90°C (FMS21) Pp39

J. Blahovec

Czech University of Life Sciences in Prague, Czech Republic

16:15 Application of chitosan-sunflower oil edible films to pork meat hamburgers (FMS425) Pp41

M. Vargas, A. Albors, A. Chiralt

Instituto Universitario de Ingeniería de Alimentos para el Desarrollo (IUIAD), Universidad Politécnica de Valencia, Spain

16:30 Effect of thermal processing and storage on digestibility of starch in whole grains (FMS205) Pp43

A.A. Alsaffar

Yeditepe University, Turkey

16:45 Locating proteins by using quantum dot nanocrystals in flat bread (FMS62) Pp45

N. Sozer, J.L. Kokini

Food Science and Human Nutrition Department, University of Illinois, USA

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MONDAY, MAY 23rd

15:00-17:00

Session 2: Food rheological properties

EPF 3

Room Terpsichore (B)

Chairs: M. Dalla Rosa, S.M. Alzamora

- 15:00 Physico-chemical and rheological changes of fruit purees during storage (EPF814) Pp221**
F. Balestra, E. Cocci, **M. Dalla Rosa**
Department of Food Science, University of Bologna, Italy
- 15:15 The influence of homogenisation on the micro-structure, rheological and sensory properties of some food fiber suspensions (FMS315) Pp223**
E. Tornberg^a, H. Bengtsson^b
^aDepartment of Food Technology, Lund University, Sweden, ^bFindus Sverige AB, Sweden
- 15:30 Viscoelastic behavior of Peruvian carrot starch gels as affected by temperature and concentration (FMS902) Pp225**
K. Mislaine Albano, C.M. Landi Franco, **V.R. Nicoletti Telis**
São Paulo State University - UNESP, Brazil
- 15:45 How the drying rate at bread crust can affect its viscosity? (EPF827) Pp227**
F.M. Vanin^{a,b}, C. Michon^c, **G. Trystram^c**, T. Lucas^{a,b}
^aCemagref, Food Process Engineering Research Unit, UR TERE, France, ^bUniversité européenne de Bretagne, F-35000 Rennes, France, ^cAgroParisTech, JRU n°1145 Engineering Processes Food, France
- 16:00 Quantifying the effect of extrusion processing of a confectionery paste (EPF1037) Pp229**
P. Martin^a, A. Walker^b, C. Martin^b, B. Hook^c, D. Cunningham^c, I. Van Damme^c
^aSchool of Chemical Engineering and Analytical Science, The University of Manchester, UK, ^bDepartment of Engineering Science, University of Oxford, UK, ^cMars UK Ltd, UK
- 16:15 Effect of incubation temperature and caseinates on the rheological behaviour of kefir (EPF447) Pp231**
G. Dimitreli, K.D. Antoniou
Department of Food Technology, ATEI of Thessaloniki, Greece
- 16:30 Possibility of using acoustic techniques for dough processing evaluation (EPF662) Pp233**
H. Elfawakhry, M.A. Hassan, T. Becker
Group of (Bio-) Process Technology and Process Analysis, Faculty of Life Science Engineering, Technische Universität München, Germany

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MONDAY, MAY 23rd

15:00-17:00

Session 3: Thermal processing

AFT 2

Room Erato

Chairs: A. Teixeira, R. Simpson

- 15:00 Advances and challenges in thermal processing technology (AFT180) Pp529**
A. Teixeira^a, G. Ghai^b, S. Almonacid^c
^aUniversity of Florida, USA, ^bFood and Drug Administration, College Park, USA, ^cUniversidad Tecnica Federico Santa Maria, Chile
- 15:30 Biological validation of thermal processing using food alginate simulated particles inoculated with bacterial spores (AFT867) Pp531**
H.F. Hassan, H.S. Ramaswamy
McGill University, Canada
- 15:45 Temperature Integrators as tools to validate thermal processes in food manufacturing (AFT1183) Pp533**
P.J. Fryer, M.J.H. Simmons, P.W. Cox, K. Mehauden, S. Hansrijit, F. Challou, S. Bakalis
School of Chemical Engineering, University Of Birmingham, UK
- 16:00 Influence of whey protein aggregation on the residence time distribution in a helically holding tube during heat treatment process (AFT347) Pp535**
F.T. Ndoye^{a,b}, N. Erabit^{a,b}, D. Flick^{a,b}, G. Alvarez^c
^aAgroParisTech, UMR1145 Ingénierie Procédés Aliments, France, ^bINRA, UMR1145 Ingénierie Procédés Aliments, France, ^cRefrigeration Processes Engineering Research Unit, Cemagref, France
- 16:15 Potato deep-fat frying. The role of buoyancy on heat and mass transfer phenomena (AFT1238) Pp537**
J.S. Lioumbas, T.D. Karapantsios
Division of Chemical Technology, Department of Chemistry,, Aristotle University of Thessaloniki, Greece
- 16:30 Steam condensation dynamics in annular gap and multi-hole steam injectors (AFT470) Pp539**
F. Innings, L. Hamberg
Tetra Pak Processing Systems, Sweden
- 16:45 Commercially sterilized mussel meats (*Mytilus Chilensis*): A study on process yield (AFT1082) Pp541**
S. Almonacid^{a,c}, J. Bustamante^a, A.R. Simpson^{a,c}, M. Pinto^a, F. Lancellotti^a, A. Teixeira^b
^aDepartamento de Ingeniería Química y Ambiental, Universidad Técnica Federico Santa María, Chile, ^bAgricultural and Biological Engineering Department, University of Florida, USA, ^cCentro Regional para el Estudio de Alimentos Saludables, Chile

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MONDAY, MAY 23rd

15:00-17:00

Session 4: Separation and purification processes

NFP 3

Room Hesperides

Chairs: A. Voilley, N. Tao

15:00 Transfer of water and active molecules at the interfaces in complex food systems: theoretical and practical aspects (NFP686) Pp373

A. Voilley^{a,b}, A.-M. Seuvre^{a,c}, R. Gougeon^{a,d}, T. Karbowiak^{a,b}, D. Chassagne^{a,d}, F. Debeaufort^{a,c}

^aEA EMMA, Université de Bourgogne, France, ^bAgrosup Dijon, France, ^cIUT Génie Biologique, Université de Bourgogne, France, ^dInstitut Universitaire de la Vigne et du Vin "Jules Guyot", Université de Bourgogne, France

15:30 Impact of protein interactions and transmembrane pressure on physical properties of filter cakes formed during filtrations of skim (NFP41) Pp375

T. Steinhauer, W. Kühnl, U. Kulozik

ZIEL Food and Nutrition Research Center, Technische Universität München, Germany

15:45 Recovery of phenolic compounds from a grape marc extract with colloidal gas aphrons (NFP664) Pp377

G. Spigno^a, D. Amendola^a, M. Dermiki^b, P. Jauregi^b

^aUniversità Cattolica Sacro Cuore, Institute of Oenology and Food Engineering, Italy, ^bUniversity of Reading, Department of Food and Nutritional Sciences, UK

16:00 Adsorption of polyphenols from ginger rhizomes on an anion exchange resin Amberlite IR-400 - Study on effect of pH and temperature (NFP211) Pp379

C. Datta, A. Dutta, D. Dutta, S. Chaudhuri

Department of Biotechnology, National Institute of Technology, India

16:15 Fractionation of whey proteins by means of membrane adsorption chromatography (NFP838) Pp381

L. Voswinkel, U. Kulozik

Freising, Germany

16:30 Extraction of *Thunnus albacares* orbital oil by supercritical carbon dioxide (NFP48) Pp383

N. Tao, M. Zhou, X. Wang, Y. Liu

College of Food Science and Technology, Shanghai Ocean University, China

16:45 Impact of the ionic composition on the separation of glucose/lactate solutions by nanofiltration (NFP746) Pp385

S. Galier^a, C. Umpuch^b, S. Kanchanatawee^b, H. Roux-de Balmann^a

^aUniversité de Toulouse, INPT, UPS, Laboratoire de Génie Chimique, France, ^bSchool of Biotechnology, Suranaree University of Technology, Thailand

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MONDAY, MAY 23rd

15:00-17:00

Session 5: Feeding the world in a sustainable environment

**Round Table 1
Room Santorini**

Chairs: W.E.L. Spiess, D. Mercer, H.N. Lazarides

- 15:00 Does biofuel production threaten food security? (INM732) Pp749**
W.E.L. Spiess
c/o Karlsruhe Institut für Technologie (KIT), Institut für Bio- und Lebensmitteltechnik, Germany
- 15:30 IUFOST's strategy to strengthen food security in rural areas of developing countries (INM728) Pp751**
W.E.L. Spiess^a, D.B. Lund^b, D.G. Mercer^c
^aKarlsruhe Institut für Technologie, Germany, ^bUniversity of Wisconsin, USA, ^cUniversity of Guelph, Canada
- 15:45 Hunger and Obesity: Is this the best we - food scientists/engineers - can offer to the world community in the 21st century? (INM925) Pp753**
H.N. Lazarides
Department of Food Science and Technology, Aristotle University of Thessaloniki, Greece
- 16:00 Challenges facing development within the agri-food sector of Sub-Saharan Africa (INM85) Pp755**
D.G. Mercer
Department of Food Science, University of Guelph, Canada
- 16:15 Bio-butanol from food wastes - fermentative production, use as biofuel and the influence on the emissions (FEW797) Pp757**
M. Stoeberl^{a,b}, R. Werkmeister^{a,b}, M. Faulstich^b, W. Russ^a
^aResearch Group of Environmental Engineering for the Food Industry, Technische Universität München, Germany, ^bInstitute of Resource and Energy Technology, Technische Universität München, Germany
- 16:30 Simultaneous production of food protein isolates and a biodiesel from mustard seed (FPE49) Pp759**
L.L. Diosady
Department of Chemical Engineering and Applied Chemistry, University of Toronto, Canada
- 16:45 Design of an agricultural production model by structuring profitable productive units to attend the food demand of the mining complex located in the center of the department of Cesar, Colombia (FPD76) Pp761**
C. Gutierrez De Piñeres^a, J.L. Hereyra^b, C. Ruiz^a, C. Ramirez^a
^aCentro Biotecnológico del Caribe, SENA, Colombia, ^bDirección General del SENA, Colombia

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17:00-17:30

Coffee Break

MONDAY, MAY 23rd 17:30-19:00

MONDAY, MAY 23rd

17:30-19:00

Session 1: Food structure and modeling

FMS 3

Room Terpsichore (A)

Chairs: E. Dumoulin, N. Sakai

17:30 Aroma encapsulation in powder by spray drying, and fluid bed agglomeration and coating (FMS279) Pp47

C. Turchiuli^{a,b}, M.E. Cuvelier^a, P. Giampaoli^a, E. Dumoulin^a

^aAgroParisTech, UMR1145, France, ^bUniv. Paris-Sud, France

17:45 The effect of electrical processing on mass transfer and mechanical properties of food materials (FMS1115) Pp49

G. Porras-Parral, T. Miri, S. Bakalis, P. Fryer

School of Chemical Engineering, University of Birmingham, UK

18:00 Stokes shape factor for lactose crystals (FMS595) Pp51

K. Shaffer^a, C.E. Davies^a, A.H.J. Paterson^a, G.A. Hebbink^b

^aSchool of Engineering and Advanced Technology, Massey University, New Zealand, ^bDMV Fonterra Excipients GmbH and Co KG, The Netherlands

18:15 Multi-scale mechanics and structure of semi-hard cheese (FMS743) Pp53

T.J. Faber^{a,b}, P.J.Schreurs^b, J.M.J.G. Luyten^a, H.E.H. Meijer^b

^aFriesland Campina Research, The Netherlands, ^bEindhoven University of Technology, The Netherlands

18:30 Ice crystals nucleation, growth and breakage modelling in a scraped surface heat exchanger (FMS305) Pp55

H. Benkhelifa^a, M. Arellano^{a,b}, G. Alvarez^b, D. Flick^a

^aUMR1145 AgroParisTech/INRA, Ingénierie-Procédés-Aliments, France, ^bCemagref UR Génie des Procédés Frigorifiques, France

Session 2: Thermophysical and physicochemical properties of foods

EPF 4

Room Terpsichore (B)

Chairs: M.O. Ngadi, M. Marcotte, A. Kostaropoulos

17:30 Effects of heat treatment on protein denaturation and starch gelatinisation in wheat flour (EPF493) Pp235

T.R.A. Magee, G. Neill

School of Chemistry and Chemical Engineering, Queen's University Belfast, UK

17:45 Determination of drip loss in beef by NIR hyperspectral imaging and multivariate analysis (EPF680) Pp237

G. ElMasry^a, D.-W. Sun^b, P. Allen^b

^aFood Refrigeration & Computerised Food Technology, School of Agriculture, Food Science & Veterinary Medicine, University College Dublin, Ireland, ^bAshtown Food Research Centre, Teagasc, Ireland

18:00 Specific heat capacity of crude palm oil (EPF892) Pp239

J.S. Alakali^a, S.O. Eze^b, M.O. Ngadi^c

^aDepartment of Food Science & Technology, University of Agriculture Makurdi, Nigeria, ^bDepartment of Chemistry Abia State, University Uturu, Nigeria, ^cDepartment of Bioresource Engineering, McGill University, Canada

18:15 Modelling the effect of temperature and relative humidity on physicochemical properties of honey (EPF23) Pp241

L. Mehryar^a, M. Esmaili^a, A. Hassanzadeh^b

^aDepartment of Food Science and Technology, University of Urmia, Iran, ^bDepartment of Chemistry, University of Urmia, Iran

18:30 Assessment of physical properties and dissolution behavior of protein-based powders (FMS10) Pp243

A. Gianfrancesco^a, C. Casteran^{a,b}, J.C. Andrieux^a, M. Giardiello^a, G. Vuataz^a

^aNestle Research Center, Switzerland, ^bNestle Product Technology Center, Switzerland

MONDAY, MAY 23rd

17:30-19:00

Session 3: Innovation in traditional processing -I-

AFT 3

Room Erato

Chairs: J.P. Clark, K.R. Swartzel

17:30 Applying advances in food process technology in industry (AFT1217) Pp543

J.P. Clark

Consultant, USA

18:00 Advanced meal processing and preparation (AFT74) Pp545

K.R. Swartzel

Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, USA

18:15 Development of citrus grading system using image processing (AFT1026) Pp547

U. Ahmad^a, M. Suhil^b, R. Tjahjohutomo^c, H.K. Purwadaria^d

^aDep. of Mechanical & Biosystem Engineering, Bogor Agricultural Uni., Indonesia, ^bCentre of Agricultural Mechanization Development, Ministry of Agriculture, Indonesia, ^cCentre of Postharvest Technology Development, Ministry of Agriculture, Indonesia, ^dDep. of Mechanical & Biosystem Engineering, Bogor Agricultural Uni., Indonesia

18:30 Variation of fluidization velocities during drying-toasting of precooked whole soybeans (AFT389) Pp549

R. Martín Torrez Irigoyen^a, S.A. Giner^{a,b,c}

^aCentro de Investigación y Desarrollo en Crioteología de Alimentos (CIDCA) Universidad Nacional de La Plata, Argentina, ^bFacultad de Ingeniería, Universidad Nacional de La Plata, Argentina, ^cComisión de Investigaciones Científicas de la Provincia de Buenos Aires, Argentina

18:45 Evaluation of anthocyanin content on blackberry juice (*Rubus* spp.) processed by microfiltration (AFT289) Pp551

F.S. Monteiro^a, L.A. Viotto^a, L.M.C. Cabral^b

^aUNICAMP/FEA, Brazil, ^bEmbrapa Food Technology, EMBRAPA/CTAA, Brazil

Session 4: Micro- and nano- sciences and technology -II-

FMS 4

Room Hesperides

Chairs: T. Becker, S.C. Pinho

17:30 Challenges in the identification of engineered nanomaterials in foods (NFP230) Pp21

R. Greiner, V. Graef, E. Walz, D. Behnlian

Max Rubner-Institut, Department of Food Technology and Bioprocess Engineering, Germany

17:45 Production and evaluation of solid lipid microcapsules of *Lactobacillus acidophilus* produced by spray chilling (FMS786) Pp23

D.L. Pedroso, M. Dogenski, M. Thomazini, R.J.B. Heinemann, C.S. Favaro-Trindade

Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Brazil

18:00 Implementation of a novel tool to quantify dough microstructure (FMS829) Pp25

M. Jekle, T. Becker

Technische Universität München, Institute of Brewing and Beverage Technology, Germany

18:15 Characterization of spray-dried phospholipid particles for the production of beta-carotene-loaded liposomes (FMS92) Pp27

C.R. Silva, M. Moraes, J.M.P. Carvalho, S.C. Pinho

Laboratory of Colloids and Functionality of Macromolecules, Department of Food Engineering, School of Animal Science and Food Engineering, University of São Paulo (USP), Brazil

18:30 Multilayer microcapsules based on supramolecular structures produced from bovine serum albumin and high methoxy pectin (FMS501) Pp29

Y. Arsianti, Z. Hui, L. Sagis

Wageningen University, The Netherlands

18:45 Metal-based nanocomposites as antimicrobials in food packaging applications (FMS1203) Pp31

A. Fernandez^a, E. Lloret^b, A. Llorens^a, P. Picouet^b

^aInstituto de Agroquímica y Tecnología de Alimentos, CSIC, Spain, ^bDepartament de Tecnologia dels Aliments, Institut de Recerca i Tecnologia Agroalimentàries (IRTA), Spain

MONDAY, MAY 23rd

17:30-19:15

Session 5: Food engineering education in a changing world

Round Table 2

Room Santorini

Chairs: I.S. Saguy, R. Costa

17:30 Academia-industry innovation interaction: paradigm shifts and avenues for the future (INM148) Pp763

I.S. Saguy

The Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Israel

18:00 Food safety and knowledge transfer in Europe - A challenge for all stakeholders (INM142) Pp765

S. Braun, K. Hadwiger

University of Stuttgart, Germany

18:15 Skills training for food industry workers in Sub-Saharan Africa (INM86) Pp767

D.G. Mercer^a, D.B. Lund^b

^aDepartment of Food Science, University of Guelph, Canada, ^bUniversity of Wisconsin, USA

18:30 Should Academia support the regulation of professions related to food science and technology? (FMS1306) Pp769

R. Costa^a, S.S. Možina^b

^aCERNAS/ Escola Superior Agrária, Instituto Politécnico de Coimbra, Portugal, ^bUniversity of Ljubljana, Biotechnical Faculty, Department of Food Science and Technology, Slovenia

18:45 Recognition of prior learning - A research under ISEKI_Food 3 project (INM1308) Pp771

M. Dalla Rosa^a, R. Costa^b, C. Silva^c

^aAlma Mater Studiorum, University of Bologna, Department of Food Science, Italy, ^bCERNAS/ Escola Superior Agrária, Instituto Politécnico de Coimbra, Portugal, ^cUniversidade Católica Portuguesa, Escola Superior de Biotecnologia, Portugal

19:00 Academic and professional mobility of food scientists and engineers in Europe: the introduction of the EQAS food label and the development of a corresponding quality assurance scheme (INM1315) Pp773

I. Wasser^a, J.M. Frias^b, R. Costa^c

^aASIIN e.V. and ASIIN Consult GmbH, Germany, ^bDublin Institute of Technology, Ireland, ^cCERNAS/ Escola Superior Agrária, Instituto Politécnico de Coimbra, Portugal

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21:00

Cultural Event

TUESDAY, MAY 24th

08:00-14:30

Registration desk open

TUESDAY, MAY 24th 08:15-10:30

TUESDAY, MAY 24th

08:15-10:30

Session 1: Concentration and dehydration processes

AFT 4

Room Terpsichore (A)

Chairs: A.S. Mujumdar, E. Tsotsas, M.H. Nguyen

8:15 **Food drying as a challenge between process efficiency and product quality (FPD1204) Pp553**

E. Tsotsas

Thermal Process Engineering, Otto von Guericke University Magdeburg, Germany

8:45 **Some innovative drying technologies for dehydration of foods (AFT1182) Pp555**

A.S. Mujumdar, S.V. Jangam

Mechanical Engineering Department, National University of Singapore, Singapore

9:15 **The DCMD-R as an energy efficient process (AFT461) Pp557**

M.H. Nguyen^{a,b}, V.A. Bui^c

^aUniversity of Newcastle, Australia, ^bUniversity of Western Sydney, Australia, ^cNongLam University, Vietnam

9:30 **Modeling the effect of osmotic pre-treatment with alternative solutes on the shelf life of gilthead seabream fillets during refrigerated and super-chilled storage (NFP644) Pp559**

T.N. Tsironi, P.S. Taoukis

National Technical University of Athens, School of Chemical Engineering, Laboratory of Food Chemistry and Technology, Greece

9:45 **The physical behaviour of food protein's supramolecular structures during freeze-drying (AFT469) Pp561**

S. Passot^a, F. Fonseca^a, S. Bouhallab^b

^aUMR782, Génie et Microbiologie des Procédés Alimentaires, INRA, France, ^bUMR1253, Science et Technologie du lait et de l'œuf, INRA, France

10:00 **Aroma composition of microwave vacuum dried dill (*Anethum graveolens* L.) stems (AFT338) Pp563**

Z. Kruma, R. Galoburda, M. Sabovics, I. Gramatina, I. Skudra, I. Dabina-Bicka

Department of Food Technology, Faculty of Food Technology, Latvia University of Agriculture, Latvia

10:15 **Study on metabolic consequences of vacuum impregnation of apple tissue (AFT950) Pp565**

U. Tylewicz^a, S. Romani^a, P. Rocculi^a, S. Widell^b, M. Dalla Rosa^a, F. Gómez Galindo^c

^aDepartment of Food Science, University of Bologna, Italy, ^bDepartment of Biology, Lund University, Sweden,

^cDepartment of Food Technology Engineering and Nutrition, Lund University, Sweden

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TUESDAY, MAY 24th

08:15-10:30

Session 2: Modeling digestive and metabolic processes

FPE 2

Room Terpsichore (B)

Chairs: R.P. Singh, S. Bakalis

8:15 Understanding the fluid dynamics of gastric digestion using computational modelling (MCF204) Pp619

M. J. Ferrua^a, R.P.Singh^b

^aRiddet Institute, Massey University, New Zealand, ^bDepartment of Biological and Agricultural Engineering, University of California, USA

8:30 Starch digestion and glucose absorption in the small intestine (FPE565) Pp621

M. J. Fonseca, S. Bakalis, P. Fryer

School of Chemical Engineering, University of Birmingham, UK

8:45 Study on the viability of free and immobilized *B. Bifidum* under human gastrointestinal *in vitro* conditions with the presence of meal samples (FPE330) Pp623

A.G. Mendoza Madrigal^a, G.V. del Toro^b, J.J. Chanona Pérez^a, E. Terres Rojas^c, E. Durán Páramo^b

^aDepartamento de Graduados e Investigación en Alimentos, Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, México, ^bDepartamento de Bioconversiones, Unidad Profesional Interdisciplinaria de Biotecnología, Instituto Politécnico Nacional, México, ^cLaboratorio de Microscopia de Ultra Alta Resolución, Instituto Mexicano del Petróleo, México

9:00 Behaviour of emulsions stabilized by maillard-based glycoconjugates under simulated gastrointestinal conditions (FMS327) Pp625

U. Lesmes^a, D.J. McClements^b

^aDepartment of Biotechnology and Food Engineering, Technion – IIT, Israel, ^bDepartment of Food Science, University of Massachusetts – Amherst, USA

9:15 Bioaccessibility and metabolism of flaxseed lignans evaluated in a single batch simulator of digestive process (FPE621) Pp627

C. Fuentealba, O. Muñoz

Instituto de ciencia y tecnología de los alimentos, Universidad Austral de Chile, Chile

9:30 Experimental characterization of the fluid dynamics in an in-vitro system simulating the peristaltic movement of the stomach wall (FPE218) Pp629

F. Marra^a, M.J. Ferrua^b, R.P. Singh^{b,c}

^aDepartment of Industrial Engineering, University of Salerno, Italy, ^bRiddet Institute, Massey University, New Zealand, ^cDepartment of Biological and Agricultural Engineering, University of California, USA

9:45 Rheological properties of brown and white rice during *in vivo* digestion in pigs (FPE415) Pp631

G.M. Bornhorst^a, S.M. Rutherford^b, N. Stroebinger^b, R.P. Singh^{a,b}, P. Moughan^b

^aUniversity of California Davis, USA, ^bRiddet Institute, Massey University, New Zealand

10:00 Food breakdown during human mastication - Quantitative characterization (FMS597) Pp633

E.H.-J. Kim^a, M.P. Morgenstern^a, J.E. Bronlund^{b,c}, K.D. Foster^d, A. Le Got^e

^aThe New Zealand Institute for Plant & Food Research Limited, New Zealand, ^bSchool of Engineering and Advanced Technology, Massey University, New Zealand, ^cRiddet Institute, Massey University, New Zealand, ^dInstitute of Food, Nutrition and Human Health, Massey University, New Zealand, ^eAlimentation et Sante, Institut Polytechnique, France

10:15 Peristaltic flow characteristics of non-newtonian fluids in elastic tubes (FPE659) Pp635

S. Nahar, S.A.K. Jeelani, E.J. Windhab

Laboratory of Food Process Engineering, Institute of Food, Nutrition and Health, ETH Zurich, Switzerland

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TUESDAY, MAY 24th

08:15-10:30

Session 3: Modeling of quality and safety and predictive microbiology MFS 2
Room Erato

Chairs: J.F. Van Impe, K. Koutsoumanis, R. Buckow

8:15 **Stochastic models of microbial growth as a tool for a risk-based management of food quality and safety (MFS1208) Pp463**

K. Koutsoumanis

Food Science And Technology, Aristotle University Of Thessaloniki, Greece

8:40 **Developing next generation predictive models: a systems biology approach (MFS1321) Pp465**

J.F. Van Impe

BioTeC-Chemical and Biochemical Process Technology and Control, Department of Chemical Engineering, Katholieke Universiteit Leuven, Belgium

9:00 **Salmonella survival in low a_w environment (MFS1156) Pp467**

E. Margas^{a,b}, A. Alstrom-Moore^a, C. Dodd^b, J. Holah^a

^aCampden BRI, UK, ^bThe University of Nottingham, UK

9:15 **Predictive model for inactivation of *Lactobacillus rhamnosus* in apple juice by combined pulsed electric field and thermal processing (MFS431) Pp469**

R. Buckow, K. Karpinski, G. Knight

CSIRO Food and Nutritional Sciences, Australia

9:30 **A thermodynamic approach to assess a cellular mechanism of inactivation and the thermal resistance of *Listeria innocua* (MFS452) Pp471**

T. Skåra^{a,b}, A.M Cappuyns^b, S.O. Johnsen^a, E. Van Derlinden^b, J.T. Rosnes^a, Ø. Olsen^a, J.F.M. Van Impe^b, V.P. Valdramidis^c

^aNofima, Norway, ^bKatholieke Universiteit Leuven, Department of Chemical Engineering, BioTeC, Chemical and Biochemical Process Technology and Control, Belgium CPMF, ^cFlemish Cluster Predictive Microbiology in Foods, ^dBiosystems Engineering UCD, School of Agriculture, Food Science and Veterinary Medicine, University College Dublin, Ireland

9:45 **Operating characteristic curves for single, double and multiple fraction defective sampling plans developed for *Cronobacter* in powder infant formula (MFS717) Pp473**

A. Mussida, U. Gonzales-Barron, F. Butler

Biosystems Engineering, UCD School of Agriculture, Food Science and Veterinary Medicine, University College of Dublin, Ireland

10:00 **Heat adaptation of *Escherichia coli* K12: effect of acid shock and glucose (MFS729) Pp475**

E.G. Velliou^a, E. Van Derlinden^a, A.M. Cappuyns^a, J. Goossens^a, A.H. Geeraerd^b, F. Devlieghere^c, J.F. Van Impe^a

^aBioTeC-Chemical and Biochemical Process Technology and Control, Department of Chemical Engineering, Katholieke Universiteit Leuven, Belgium, ^bMeBioS-Division of Mechatronics, Biostatistics and Sensors, Department of Biosystems, Katholieke Universiteit Leuven, Belgium, ^cDepartment of Food Technology and Nutrition, Ghent University, Belgium

10:15 **Neural network model for predicting and classifying exotic tropical fruits based on its maturity and ripeness (MFS1029) Pp477**

H.K. Purwadaria, I.W. Budiastara, A. Rejo, D.A. Nasution

Department of Mechanical and Biosystem Engineering, Bogor Agricultural University (IPB), Indonesia

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TUESDAY, MAY 24th

08:15-10:30

Session 4: Modeling of transport phenomena -I-

MCF 3

Room Hesperides

Chairs: A. Datta, D. Flick

8:15 **Modeling food process, quality and safety: Frameworks and practical aspects (MCF1201) Pp291**

A. Datta, A. Dhall
Cornell University, USA

8:45 **Diffusion mechanisms of solutes in chitosan-based edible films - Behaviour in liquid and solid media and comparison between macro and nano scale (MCF1157) Pp293**

M.A.C. Quintas^{a,b}, A.I. Bourbon^a, J.T. Martins^a, D.A.C. Quintas^c, A.C. Pinheiro^a, A.A. Vicente^a

^aIBB - Institute for Biotechnology and Bioengineering, Universidade do Minho, Portugal, ^bCBQF - Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Portugal, ^cCentre for Telecommunications Research, King's College London, UK

9:00 **An Eulerian-Lagrangian approach for coupling CFD and population balance equation (MCF206) Pp295**

E. Chantoiseau^a, A. Plana-Fattori^a, F-T. Ndoye^b, C. Doursat^a, D. Flick^a

^aAgroParisTech, UMR1145 Ingénierie Procédés Aliments, France, ^bCemagref, Refrigeration Processes Engineering Research Unit, France

9:15 **Non-equilibrium multiphase modeling approach for convective drying of potato tissues: The spatial reaction engineering approach (S-REA) (MCF605) Pp297**

A. Putranto^b, X. Dong Chen^{a,b}

^aDepartment of Chemical and Biochemical Engineering, College of Chemistry and Chemical Engineering, Xiamen University, China, ^bDepartment of Chemical Engineering, Monash University, Australia

9:30 **3D Pore scale network model for the transport of liquid water, water vapor and oxygen in polymeric films (MCF726) Pp299**

J.E. Paz, L.A. Segura

Food Engineering Department, Universidad del Bío-Bío, Chile

9:45 **Multiscale model of structure development in expanded starch snacks (FMS65) Pp301**

R.G.M. van der Sman, J. Broeze

Agrotechnology Food Sciences Group, Wageningen University & Research, the Netherlands

10:00 **Effect of morphology on water sorption in cellular solid foods (MCF1309) Pp303**

E. Esveld^a, R. van der Sman^a, M. Witek^{b,d}, C. Windt^{b,e}, G. van Dalen^c, H. van As^b, J. van Duynhoven^{b,c}, M. Meinders^{a,f}

^aFood & Biobased Research, Wageningen University & Research Centre, The Netherlands, ^bLaboratory of Biophysics & Wageningen NMR Centre, Wageningen University, The Netherlands, ^cUnilever R&D, The Netherlands, ^dInstitute of Physics, Jagiellonian University, Poland, ^eJülich Research Centre, Germany, ^fTop Institute Food & Nutrition, The Netherlands

10:15 **Fundamentals-based quality prediction: texture development during drying and related processes (EPF1210) Pp305**

S. Thussu, A. Datta

Cornell University, USA

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TUESDAY, MAY 24th

08:15-10:30

Session 5: Food dispersions and emulsions

FMS 5

Room Santorini (1)

Chairs: I. Mandala, P. Dejmek

- 08:15 Texture and morphology of milk foams produced by steam injection (FMS325) Pp57**
A. Sher^a, J.-C. Gumy^b, C. Jimenez-Junca^c, K. Niranjana^c
^aNestle PTC, USA, ^bNestle PTC, Switzerland, ^cDepartment of Food and Nutritional Sciences, University of Reading, UK
- 08:30 Starch particles for food based Pickering emulsions (FMS443) Pp59**
A. Timgren, M. Rayner, M. Sjöö, P. Dejmek
Department of Food Technology, Engineering, and Nutrition, Lund University, Sweden
- 08:45 Microstructural design to reduce lipid oxidation in oil-in-water emulsions (FMS489) Pp61**
M. Kargar, F. Spyropoulos, I.T. Norton
Department of Chemical Engineering, University of Birmingham, UK
- 09:00 Characterization of spray-dried layer-by-layer emulsions (FMS789) Pp63**
Y. Serfert^a, J. Schröder^b, A. Mescher^c, J. Laackmann^d, S. Drusch^e, K. Schwarz^a
^aUniversity of Kiel, Germany, ^bKarlsruhe Institute of Technology KIT, Germany, ^cUniversity of Dortmund, Germany, ^dUniversity of Hamburg, Germany, ^eBeuth University of Applied Sciences, Germany
- 09:15 Production of uniform o/w emulsions through a porous medium of micron-sized glass beads (FMS938) Pp65**
A. Nazir, K. Schroën, R. Boom
Department of Agrotechnology and Food Sciences, Wageningen University, The Netherlands
- 09:30 Physicochemical characterization of hydroxypropyl methylcellulose based oil-in-water emulsions for edible film formation (FMS956) Pp67**
R.N. Zúñiga^a, F. Osorio^b, J.M. Aguilera^a, F. Pedreschi^a
^aDepartment of Chemical and Bioprocess Engineering, Pontificia Universidad Católica de Chile, Chile, ^bDepartment of Food Science and Technology, Universidad de Santiago de Chile, Chile
- 09:45 The effect of different stabilizers on the production of sub-micron o/w emulsions by using ultrasound techniques (FMS1059) Pp69**
O. Kaltsa^a, C. Michon^b, S. Yanniotis^a, I. Mandala^b
^aAgricultural University of Athens, Department of Food Science & Technology, Greece, ^bAgroParisTech/CNAM/INRA UMR 1145 IPA, Unit for Food Process Engineering, France
- 10:00 Physical stability of beverage emulsions as influences of orange oil, tragacanth and arabic gums concentrations (FMS1064) Pp71**
E. Rezvani^a, A.R. Taherian^b, G. Schleining^a
*^aDepartment of Food Science and Technology, BOKU, University of Natural Resources and Life Sciences, Austria
^bFood Research and Development Center, Agriculture and Agri-Food Canada, Canada*
- 10:15 Large microchannel emulsification device for producing monodisperse fine droplets (FMS959) Pp73**
I. Kobayashi^a, M.A. Neves^{a,b}, Y. Wada^c, K. Uemura^a, M. Nakajima^{a,b}
^aFood Engineering Division, National Food Research Institute, NARO, Japan, ^bGraduate School of Life and Environmental Sciences, University of Tsukuba, Japan, ^cEP Tech Co., Ltd., Japan

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TUESDAY, MAY 24th

08:15-10:30

Session 6: Emerging technologies -II-

NFP 4

Room Santorini (2)

Chairs: E. Vorobiev, N. Lebovka, H. Feng

- 8:15** Enhancing extraction from solid foods and biosuspensions by Electrical Pulsed Energy (Pulsed Electric Field, Pulsed Ohmic Heating and High Voltage Electrical Discharge) (NFP514) Pp403
E. Vorobiev^a, N. Lebovka^b
^aDépartement de Génie des Procédés, Université de Technologie de Compiègne, Centre de Recherche de Royallieu, France, ^bInstitute of Biocolloidal Chemistry named after F.D. Ovcharenko, NAS of Ukraine, Ukraine
- 8:45** **Efficacy of electrolyzed water produced from different principles (NFP14) Pp405**
P. Pangloli, Y.-C. Hung
Department of Food Science and Technology, University of Georgia, USA
- 9:00** **Aggregation and gelation properties of egg white proteins as affected by high intensity ultrasound (NFP317) Pp407**
C. Arzeni^a, O.E. Pérez^b, A.M.R. Pilosof^b
Departamento de Industrias, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina, ^aAgencia Nacional de Promoción Científica y Tecnológica de la República Argentina (ANPCyT), ^bConsejo Nacional de Investigaciones Científicas y Técnicas, Argentina
- 9:15** **Assessing the mechanism of microbial inactivation during ozone processing (NFP376) Pp409**
S. Patil^a, V.P. Valdramidis^b, K.A.G. Karatzas^c, P. Bourke^a, P.J. Cullen^a
^aFood and Health Research Centre, Dublin Institute of Technology, Ireland, ^bBiosystems Engineering UCD School of Agriculture, Food Science and Veterinary Medicine, University College Dublin, Ireland, ^cDepartment of Microbiology, National University of Ireland, Ireland
- 9:30** **High intensity ultrasound as a new food processing and preservation modality (NFP545) Pp411**
H. Feng^a, B. Zhou^a, Y. Li^b, H. Lee^a, J.W. Lee^a, P. Raviyan^c, Z. Zhang^a
^aDepartment of Food Science and Human Nutrition, University of Illinois at Urbana-Champaign, USA, ^bDepartment of Agricultural and Biological Engineering, University of Illinois at Urbana-Champaign, USA, ^cChiang Mai University, Faculty of Agro-Industry, Thailand
- 9:45** **Effects of ohmic heating on denaturation of whey proteins solutions: Influence on whey-derived products (NFP1014) Pp413**
R.N. Pereira, J.A. Teixeira, A.A. Vicente
IBB-Institute for Biotechnology and Bioengineering, Centre for Biological Engineering, University of Minho, Portugal
- 10:00** **Optimization of microwave cooking of courgette in terms of nutrient preservation and energy consumption (NFP668) Pp415**
I.D. Bedoui^a, H. Abdellaoui^b, R. Alexa^a, P. Jacolot^a, C. Druon^a, F.J. Tessier^a, J.-C. Laguerre^{a,c}
^aInstitut Polytechnique Lasalle Beauvais, France, ^bInstitut Nationale Agronomique de Tunis, Ressources Animales Halieutiques et Technologies Agroalimentaires, Tunisia, ^cUMR GENIAL 1145 - Ingénierie Procédés Aliments (INRA - AgroParisTech - CNAM), France
- 10:15** **Glass transition changes during osmotic dehydration (FMS931) Pp417**
M.E. Rosas-Mendoza^{a,b}, J.L. Fernández-Muñoz^b, J.L. Arjona-Román^a
^aDepartamento Ingeniería y Tecnología, FES-Cuautitlán UNAM, Estado de México, México, ^bCentro de Investigación en Ciencia Aplicada y Tecnología Avanzada del Instituto Politécnico Nacional, México

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10:30

Coffee Break

TUESDAY, MAY 24th 11:30-14:15

TUESDAY, MAY 24th

11:30-14:15

Session 1: Water and water related phenomena in foods

FMS 6

Room Terpsichore (A)

Chairs: A.I. Liapis, T.P. Labuza

- 11:30 **Water relations in food: paradigm shifts to supplant "Cook and Look" (FMS1316) Pp75**
T.P. Labuza
Department of Food Science and Nutrition, University of Minnesota, USA
- 12:00 **Water-macromolecule interactions in food dehydration and the effects of pore structures on such interactions (FMS147) Pp77**
J.-C. Wang, A.I. Liapis
Department of Chemical and Biological Engineering, Missouri University of Science and Technology, USA
- 12:30 **Quantification in starch microstructure as a function of baking time (FMS100) Pp79**
M. Schirmer, M. Jekle, T. Becker
Institute of Brewing and Beverage Technology, Technische Universität München, Germany
- 12:45 **Mass transfer during osmotic dehydration of apple using sucrose, fructose and maltodextrin solution (FMS779) Pp81**
M.A. Khan^a, R.N. Shukla^a, S. Zaidi^b
^a*Department of Post Harvest Engineering & Technology, AMU, India*, ^b*Department of Chemical Engineering, AMU, India*
- 13:00 **Effect of maltodextrins on water adsorption and glass transition of spray dried soy sauce powders (FMS848) Pp83**
W. Wang, W. Zhou
Department of Chemistry, National University of Singapore, Singapore
- 13:15 **Water absorption as an evaluation method of cooking quality for yam (*Dioscorea alata*) and cassava (*Manihot esculenta crantz*) (FMS932) Pp85**
K.K. Olivier^{a,b}, N. Charlemagne^{a,b}, B. Bassirou^b, N'dri Denis^a, A. N'guessan Georges^a
^a*UFR STA, Université Abobo-Adjamé, Côte d'Ivoire*, ^b*Centre Suisse de Recherches Scientifiques en Côte d'Ivoire (CSRS), Côte d'Ivoire*
- 13:30 **Moisture penetration and crystallization in sugar glasses (FMS822) Pp87**
R. Bund, R. Hartel
Department of Food Science, UW-Madison, USA
- 13:45 **Osmo-dehydration of fruits: A thermodynamic approach via Knudsen thermogravimetry (FMS1202) Pp89**
D. Fessas, M. Signorelli, A. Schiraldi
DISTAM, Università di Milano, Italy
- 14:00 **Effects of different drying conditions on pasta quality (FMS227) Pp91**
L. Zhang, T. Nishizu, S. Hayakawa, K. Goto
Food Process Engineering Laboratory of Gifu University, Japan

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TUESDAY, MAY 24th

11:30-14:15

Session 2: Design and processing of functional products

FPE 3

Room Terpsichore (B)

Chairs: S.F.M. Kaufmann, M. Houska

- 11:30 Food structure engineering for nutrition, health and wellness (FPE323) Pp637**
S.F.M. Kaufmann^a, S. Palzer^b
^aNestlé Research Center, Nestec Ltd, Switzerland, ^bNestlé Product Technology Centre for Confectionery, Nestec York Ltd, UK
- 12:00 Food allergens and processing - Review of recent results (FMS997) Pp639**
M. Houska^a, I. Setinova^b, P. Kucera^c
^aFood Research Institute Prague, Czech Republic, ^bCentre of Allergology Imumed, Ltd., Czech Republic, ^cDepartment of Allergy and Clinical Immunology, University Hospital Kralovske Vinohrady, Department of Immunology, 3rd Faculty of Medicine, Charles University, Czech Republic
- 12:30 Engineering functional foods with high vegetable content (FPE233) Pp641**
E. Silva, E. Van Derlinden, L. Sagis
Food Physics Group, Wageningen University, The Netherlands
- 12:45 Synthesis of functional food powder of simple and multiple emulsions through prilling process (FPE382) Pp643**
B.N. Dubey, M.R. Duxenneuner, E.J. Windhab
Laboratory of Food Process Engineering, Institute of Food, Nutrition and Health, ETH Zurich, Switzerland
- 13:00 Self-structuring foods to impact on satiety (FPE1038) Pp645**
F. Spyropoulos^a, A.B. Norton^b, I.T. Norton^a
^aSchool of Chemical Engineering, University of Birmingham, UK, ^bSchool of Physical Sciences, University of Kent, UK
- 13:15 Effects of green tea extract on large-deformation rheological properties of steamed bread dough and some quality attributes of steamed bread (FPE825) Pp647**
V.K. Ananingsih, W. Zhou
Food Science and Technology Programme, Department of Chemistry, National University of Singapore, Singapore
- 13:30 An eye from industry on recent advances in fluid bed agglomeration of beverage powders (FPE298) Pp649**
E. Chávez Montes^a, M. Peglow^b, R. Hampel^c, J. Mariano^a, C. Filliol^a, J.-C. Gumy^a
^aNestlé PTC Orbe, Switzerland, ^bOtto von Guericke University, Germany, ^cAVA Gmb, Germany
- 13:45 Grape phenolic infusion into solids foods: studies on mass transfer and antioxidant capacity (FPE760) Pp651**
M. Ferrando^a, A. Rózek^b, I. Achaerandio^c, C. Güell^a
^aUniversity Rovira i Virgili, Spain, ^bShirota Functional Foods, Spain, ^cDepartament d'Enginyeria Agroalimentaria i Biotecnologia, Universitat Politècnica de Catalunya, UPC, Spain
- 14:00 Characterization, concentration and utilization of sweet and acid whey (FPE454) Pp653**
A.K. Alsaed^a, R. Ahmad^b, H. Aldoomy^a, S. Abd El-Gader^a, D. Saleh^a, H. Sakejha^a, L. Mustafa^a
^aDepartment of Nutrition and Food Technology, University of Jordan, Jordan, ^bIndustrial Chemistry Center, The Royal Scientific Society, Jordan

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TUESDAY, MAY 24th

11:30-14:15

Session 3: Innovation in traditional processing -II-

AFT 5

Room Erato

Chairs: Y.M. Lo, J.B. Laurindo, S. Papadakis

11:30 **Advancements in microbial polysaccharides research for frozen foods and microencapsulation of probiotics (AFT1231) Pp567**

Y.M. Lo, P.D. Williams, P.K. Soma

Department of Nutrition and Food Science, University of Maryland, USA

12:00 **Optical online measurement technique used for process control of the drying step during pasta production (AFT855) Pp569**

F. Groß^a, R. Benning^a, U. Bindrich^b, K. Franke^b, V. Heinz^b, A. Delgado^a

^a*Institute of Fluid Mechanics, Friedrich-Alexander University Erlangen-Nuremberg, Germany*, ^b*German Institute of Food Technologies, Germany*

12:15 **Optimization of lycopene microencapsulation by spray drying (AFT970) Pp571**

A.M. Goula^a, K.G. Adamopoulos^b

^a*Department of Food Science and Technology, Aristotle University of Thessaloniki, Greece*, ^b*Department of Chemical Engineering, Aristotle University of Thessaloniki, Greece*

12:30 **Inactivation of *Bacillus subtilis* spores in soybean milk by radio-frequency flash heating treatment (AFT913) Pp573**

K. Uemura, C. Takahashi, I. Kobayashi

National Food Research Institute, Japan

12:45 **Ozone usage for adjustment of technological properties of wheat baking flour (AFT936) Pp575**

O.N. Safonova^a, E.A. Kholodova^b, V.I. Golota^c

^a*Department of Foodstuffs Processing Technology, Petro Vasilenko Kharkiv National Technical University of Agriculture, Ukraine*, ^b*Department of Foodstuffs Processing Technology, Petro Vasilenko Kharkiv National Technical University of Agriculture, Ukraine*, ^c*Laboratory of Low-Temperature Non-Equilibrium Plasma Chemistry, National Science Center Kharkiv Institute Of Physics and Technology, Ukraine*

13:00 **The effect of high velocity steam injection on the colloidal stability of concentrated emulsions for the manufacture of infant formulations (AFT1094) Pp577**

E.G. Murphy^a, J.T. Tobin^a, Y.H. Roos^b, M.A. Fenelon^a

^a*Teagasc Food Research Centre, Ireland*, ^b*School of Food and Nutritional Sciences, University College Cork, Ireland*

13:15 **A multi-flash-drying process for obtaining dehydrated crispy fruits (AFT359) Pp579**

B.D. Almeida Porciuncula, M. Fernanda Zotarelli, J. Borges Laurindo

Department of Chemical and Food Engineering, Federal University of Santa Catarina, Brazil

13:30 **Steam assisted baking of cookies as compared to conventional baking (AFT146) Pp581**

T. Kemerli^a, H. Isleroglu^a, M. Sakin Yilmazer^a, G. Guven^b, O. Ozdestan^a, F. Kaymak-Ertekin^a, A. Uren^a, B. Ozyurt^c

^a*Ege University, Faculty of Engineering, Izmir, Turkey*, ^b*Ministry of Agricultural and Rural Affairs, Izmir Province Control Laboratory, Bornova-Izmir, Turkey*, ^c*Arçelik A.S. Çayirova Campus, Turkey*

13:45 **Microencapsulation of curcumin in cells of *Saccharomyces cerevisiae* (FPE551) Pp583**

E.I. Paramera^a, S.J. Konteles^b, S.E. Papadakis^b, V.T. Karathanos^a

^a*Laboratory of Food Chemistry, Biochemistry & Physical Chemistry, Department of Nutrition & Dietetics, Harokopio University, Greece*, ^b*Department of Food Technology, Technological Educational Institute of Athens, Greece*

14:00 **Combined effect of ultraviolet (UVC) and far infrared (FIR) radiation on quality and microbial decontamination of cumin seeds (MFS140) Pp585**

S.B. Erdogdu, H.I. Ekiz

Department of Food Engineering, University of Mersin, Turkey

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TUESDAY, MAY 24th

11:30-14:15

Session 4: Food packaging and materials interaction

FMS 7

Room Hesperides

Chairs: J. Floros, B. Welt, M. Kontominas

- 11:30 Dynamic accumulation method for measuring oxygen transmission rate of food packaging materials using fluorescence oxygen detection (FMS326) Pp93**
B. Welt, A. Abdellatif
University of Florida, USA
- 11:45 Modelling of aroma compounds diffusion in polymeric films using artificial neural networks (FMS637) Pp95**
B. Bolouri^a, S.M.A. Ebrahimzadeh Mousavi^b
^aDepartment of Food Science and Technology, Islamic Azad University, Iran, ^bDepartment of Food Science and Technology, University of Tehran, Iran
- 12:00 Mathematical modelling and computational analysis of mass transport in perforation-mediated modified atmosphere packaging for strawberries (AFT748) Pp97**
G. Xanthopoulos^a, E.D. Koronaki^b, A.G. Boudouvis^b
^aAgricultural University of Athens, Department of Natural Resources and Agricultural Engineering, Greece, ^bNational Technical University of Athens, School of Chemical Engineering, Greece
- 12:15 Assessment of sustainable antimicrobial polymers with regard to their applicability in the food chain (FMS740) Pp99**
Y. Ilg^a, M. Kreyenschmidt^b, R. Lorenz^b, J. Zerbe^a, J. Kreyenschmidt^b
^aCold Chain Management Group, University of Bonn, Germany, ^bInstitute for Construction and Functional Materials, University of Applied Science, Germany
- 12:30 Biopolymer-based films as carriers of antimicrobial agents (FMS742) Pp101**
K.G. Zinoviadou, K.P. Koutsoumanis, C.G. Biliaderis
Department of Food Science and Technology, School of Agriculture, Aristotle University of Thessaloniki, Greece
- 12:45 Biodegradable fish gelatin/chitosan composite films: homogeneous and bi-layer structures (AFT1169) Pp103**
A. Fernandes, C. Cordeiro, V.D. Alves, I. Sousa
CEER – Biosystems Engineering, Technical University of Lisbon, Portugal
- 13:00 Controlled release of nisin from biopolymer films (AFT392) Pp105**
J. Chacko^a, M. Lalpuria^b, J. Floros^b, R. Anantheswaran^b
^aGeneral Mills Inc., USA, ^bDepartment of Food Science, The Pennsylvania State University, USA
- 13:15 Antimicrobial packaging films with a sorbic acid based coating (AFT619) Pp107**
C. Hauser^{a,b}, J. Wunderlich^a
^aDepartment Food Quality, Fraunhofer Institute for Process Engineering and Packaging IVV, Germany, ^bHenriette Schmidt-Burkhardt Chair of Food Chemistry, Friedrich-Alexander University Erlangen Nürnberg, Germany
- 13:30 Ultrasonic sealing of packaging films - influencing material properties (AFT527) Pp109**
K. Thürling^a, S. Bach^b
^aFraunhofer Application Centre for Processing Machinery and Packaging Technology, Germany, ^bInstitute of Processing Machines and Mobile Machines, Technische Universität Dresden, Germany
- 13:45 Mechanical properties of cassava starch-based nano-biocomposites (FMS1007) Pp111**
O. Teixeira Carvalho^a, L. Avérous^b, C.C. Tadini^a
^aDept. of Chemical Eng., Escola Politécnica, University of São Paulo, Brazil, ^bLIPHT-ECPM, Université de Strasbourg, France
- 14:00 Effects of mechanism of gelation on physical, mechanical and antibacterial properties of alginate films with oregano essential oil incorporated (FMS817) Pp113**
R. Villalobos-Carvajal^a, S. Benavides^b, J.E. Reyes^a
^aDepartment of Food Engineering, University of Bio Bio, Chile, ^bFaculty of Engineering and Business, Adventist University of Chile, Chile

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TUESDAY, MAY 24th

11:30-14:15

Session 5: Hygienic design and operation of food plants

HDO 1

Room Santorini (1)

Chairs: P.J. Fryer, T. Benezech

11:30 **Current knowledge in hygienic design: Can we minimise fouling and speed cleaning (HDO488) Pp697**

P.J. Fryer, P.T. Robbins, K. Asteriadou
School Of Chemical Engineering, University Of Birmingham, UK

12:00 **Plasma technology for sterilization of food packaging material (HDO185) Pp699**

P. Muranyi, J. Wunderlich
Fraunhofer IVV, Freising, Germany

12:15 **Local analysis of cleaning mechanisms in CIP processes (HDO371) Pp701**

M. Schöler^a, H. Föste^b, W. Augustin^b, S. Scholl^b, J.-P. Majschak^a
^a*Institute of Processing Machines and Mobile Machines, Technische Universität Dresden, Germany*, ^b*Institute for Chemical and Thermal Process Engineering, Technische Universität Braunschweig, Germany*

12:30 **Optimization of the cleaning efficiency by pulsed flow using an experimentally validated CFD model (HDO380) Pp703**

H. Föste^a, M. Schöler^b, J.-P. Majschak^b, W. Augustin^a, S. Scholl^a
^a*Institute for Chemical and Thermal Process Engineering, Technische Universität Braunschweig, Germany*, ^b*Institute of Processing Machines and Mobile Machines, Technische Universität Dresden, Germany*

12:45 **Enhanced cleaning of whey protein soils from nanocoated surfaces (HDO403) Pp705**

C. Boxler, W. Augustin, S. Scholl
Institute for Chemical and Thermal Process Engineering, Technische Universität Braunschweig, Germany

13:00 **Influencing parameters in spray cleaning of food processing equipment (HDO633) Pp707**

M. Mauermann^a, H. Köhler^b, U. Eschenhagen^c, C. Bellmann^d, A. Calvimontes^d, J.-P. Majschak^b
^a*Fraunhofer Application centre for Processing Machines and Packaging Technology, Germany*, ^b*Institute of Processing Machines and Mobile Machines, Technische Universität Dresden, Germany*, ^c*Institute of Food Technology and Bioprocess Engineering, Technische Universität Dresden, Germany*, ^d*Leibniz Institut für Polymerforschung Dresden e.V., Germany*

13:15 **Using scanning fluid dynamic gauging to study the mechanisms and kinetics of enzyme-based cleaning (HDO788) Pp709**

P.W. Gordon^a, A.D.M. Brooker^b, Y.M.J. Chew^c, J.M. Peralta^d, D.W. York^b, D.I. Wilson^a
^a*Department of Chemical Engineering and Biotechnology, University of Cambridge, UK*, ^b*Procter & Gamble Technical Centres Ltd., UK*, ^c*Department of Chemical Engineering, University of Bath, UK*, ^d*Instituto de Desarrollo Tecnológico para la Industria Química (INTEC), Argentina*

13:30 **Populating the cleaning map: Investigating the feasibility of using physical properties to predict ease of cleaning (HDO795) Pp711**

P.J. Fryer, P.T. Robbins, P. Cole, Z. Zhang, K. Asteriadou
School of Chemical Engineering, University of Birmingham, UK

13:45 **Cleanability study of a scraped surface heat exchanger (HDO90) Pp713**

W. Blel^a, P. Legentilhomme^a, T. Benezech^b, F. Fayolle^a
^a*GEPEA, UMR CNRS 6144, France*, ^b*UR 638, INRA, France*

14:00 **Removal kinetics of *Bacillus cereus* biofilms from food equipment cleaned in place (HDO1271) Pp715**

Y. Sylla, C. Faille, T. Benezech
INRA, UR638, France

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TUESDAY, MAY 24th

11:30-14:15

Session 6: Food process design economics and sustainability

FPD 1

Room Santorini (2)

Chairs: M.R. Okos, R. Boom, A. Murray

11:30 Sustainable food processing systems path to a zero discharge: reduction of water, waste and energy (FPD1125) Pp717

W.H. Lee, M.R. Okos

Agricultural and Biological Engineering, Purdue University, USA

12:00 Food process intensification for much better sustainability (FMS1276) Pp719

R.M. Boom, A.J. Van der Goot, A.E.M. Janssen, K.G.P.H. Schroën

Wageningen University, The Netherlands

12:15 Nature program – Carbon footprint reduction (AFT1293) Pp721

R. Charbonnel

Danone Baby Nutrition, The Netherlands

12:30 Breakthrough process technologies for a substantially smaller carbon footprint of food processing (AFT1287) Pp723

P. de Jong, A. van Asselt, N. Hotrum, M. Fox, M. de Roode

NIZO food research, the Netherlands

12:45 Exergy based process synthesis: More than optimisation (FMS1303) Pp725

T. Baks^a, R.M. Boom^b

^aRoyal FrieslandCampina, Corporate Research Division, The Netherlands, ^bWageningen University, The Netherlands

13:00 A systematic approach to optimization of industrial lactose crystallization (FPD591) Pp727

S.Y. Wong^a, R.K. Bund^b, R.K. Connelly^{a,b,c}, R.W. Hartel^{a,b}

^aDepartment of Biological System Engineering, University of Wisconsin, USA, ^bDepartment of Food Science, University of Wisconsin, USA, ^cSolae LLC, USA

13:15 Improving energy efficiency within the food cold-chain (FPD649) Pp729

S.J. James, C. James

Food Refrigeration and Process Engineering Research Centre (FRPERC), The Grimsby Institute of Further & Higher Education (GIFHE), UK

13:30 Production based energy management for the food industry (FPD177) Pp731

S. Franke^a, J. Höfler^c, M. Bouraia^b, W. Russ^b, T. Voigt^a, H.-C. Langwoski^a, H. Petermeier^c

^aLehrstuhl für Lebensmittelverpackungstechnik, Germany, ^bArbeitsgruppe Umwelttechnik in der Lebensmittelindustrie, Germany, ^cFachgebiet Biostatistik, Germany

13:45 Theoretical energy calculations for food processing under south african conditions (FPD1189) Pp733

A. Murray^a, L.F. Lagrange^b

^aAndrew Murray Consulting, South Africa, ^bSchool of Bioresources Engineering and Environmental Hydrology, University of KwaZulu-Natal, South Africa

14:00 Sustainable food supply chain management: An essay towards an agenda for organizational sustainable thinking (FPD859) Pp735

F. Makishi, V.L. dos Santos Silva, A.L. Gabas

Department of Food Engineer, University of São Paulo, Brazil

Free Afternoon

Athens Walking Sightseeing Tour

or

Half Day Cruise to Aegina island

WEDNESDAY, MAY 25th

08:00-18:30 Registration desk open

WEDNESDAY, MAY 25th 08:15-10:15

WEDNESDAY, MAY 25th 08:00-10:15

Session 1: Food structure, microstructure and nanostructure FMS 8
Room Terpsichore (A)

Chairs: J.M. Aguilera, E. Shimoni

08:00 **Where is the “nano” in foods? (FMS1297) Pp115**

J.M. Aguilera

Universidad Austral De Chile, Pont. Universidad Catolica de Chile

08:30 **Enhancing genistein bioavailability by amylose complexes (FMS283) Pp117**

R. Cohen, E. Shimoni

Biotechnology & Food Engineering, Technion – Israel Institute of Technology, Israel

08:45 **Nanostructures and polymorphisms in protein stabilised lipid nanoparticles, as food bioactive carriers: contribution of particle size and adsorbed materials (FMS296) Pp119**

R. Shukat^a, C. Bourgaux^b, F. Meneau^c, P. Relkin^a

^aAgroParisTech - UMR 1145, Department of Science and Engineering for Food & Bioproducts, France, ^bUMR CNRS 8612, France, ^cSynchrotron SOLEIL, France

09:00 **Technological and nutritional aspects of solid lipid nanoparticles added to o/w emulsions (FMS663) Pp121**

R. Greiner, K. Oehlke, E. Walz, V. Graef

Department of Food Technology and Bioprocess Engineering, Max Rubner-Institut, Germany

09:15 **Microstructural analysis of deep-fat fried formulated products by Confocal Laser Scanning Microscopy (CLSM) and fluorescent labelling (FMS1179) Pp123**

M.C. Moreno, P. Bouchon

Pontificia Universidad Católica de Chile, Chile

09:30 **Gas bubbles in structured foods: technical advances to monitor their growth and impact on process understanding and modeling (FMS1030) Pp125**

T. Lucas^{a,b}, D. Grenier^{a,b}, Y. Laridon^{a,b}, S. Challos^{a,b}, C. Doursat^c, D. Flick^c

^aCemagref, Food Engineering And Processing, France, ^bUniversité européenne de Bretagne, France, ^cUMR 1145, AgroParisTech, France

09:45 **Effect of pore structure and starch retrogradation on physical properties of breadcrumb (FMS219) Pp127**

M. Tashiro, T. Nishizu, K. Hashizume, H. Sako, K. Goto

Food Process Engineering Laboratory, Gifu University, Japan

10:00 **Chitin nanocrystal o/w stabilized emulsions (FMS763) Pp129**

M.V. Tzoumaki^a, T. Moschakis^a, V. Kiosseoglou^b, C.G. Biliaderis^a

^aDepartment of Food Science and Technology, School of Agriculture, Aristotle University of Thessaloniki, Greece,

^bDepartment of Chemistry, Aristotle University of Thessaloniki, Greece

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WEDNESDAY, MAY 25th

08:00-10:15

Session 2: Transport properties

EPF 5

Room Terpsichore (B)

Chairs: F. Kaymak-Ertekin, K.L. McCarthy, A. Goula

08:00 MRI texture analysis as means for addressing rehydration and milk diffusion on cereals (EPF116) Pp245

A. Melado^a, P. Barreiro^a, L. Rodríguez-Sinobas^b, M.E. Fernández-Valle^c, J. Ruíz-Cabello^d, S. Chassagne-Berces^e, H. Chanvrier^e

^aPhysical Properties Laboratory and Advanced Technologies in Agrofood, UPM, Spain, ^bRural Engineering Department, UPM, Spain, ^cCAI RMN Universidad Complutense, Spain, ^dInstituto de Estudios Biofuncionales, UCM, Spain, ^eNESTEC S.A., Switzerland

08:15 Texture changes in bolus to the “point of swallow” - fracture toughness and back extrusion to test start and end (EPF255) Pp247

B. James^a, A. Young^a, B. Smith^a, E. Kim^b, A. Wilson^b, M.P. Morgenstern^b

^aChemical and Materials Engineering, University of Auckland, New Zealand, ^bThe New Zealand Institute for Plant and Food Research, New Zealand

08:30 Moisture distribution in broccoli: measurements by MRI hot air drying experiments (EPF360) Pp249

X.Jin^a, R.G.M. van der Sman^b, E. Gerkema^c, F.J. Vergeldt^c, H. van As^c, A.J.B. van Boxtel^a

^aSystems and Control Group, Wageningen University, The Netherlands, ^bFood Process Engineering Group, Wageningen University, The Netherlands, ^cLaboratory for Biofysics, Wageningen University, The Netherlands

08:45 Rate kinetics of bread bolus disintegration during *in vitro* digestion (EPF414) Pp251

G.M. Bornhorst^a, R. P. Singh^{a,b}, D.R. Heldman^a

^aUniversity of California Davis, USA, ^bMassey University, New Zealand

09:00 Moisture sorption characteristics of heat treated flour, culinary flour and high ratio cake (EPF515) Pp253

T.R.A. Magee^a, G. Neill^a, A.H. Al-Muhtaseb^b

^aQueen's University Belfast, UK, ^bAl-Hussein Bin Talal University, Jordan

09:15 Effect of feed liquid viscosity on flavor retention of bergamot oil encapsulated in spray-dried modified starch powder (EPF602) Pp255

P. Penbunditkul^a, H. Yoshii^b, U. Ruktanonchai^c, T. Charinpanitkul^a, A. Soottitantawat^a

^aCenter of Excellent in Particle Technology, Department of Chemical Engineering, Chulalongkorn University, Thailand, ^bFood engineering Lab., Department of Applied Biological Science, Kagawa University, Japan, ^cNational Nanotechnology Center (NANOTEC), National Science and Technology Development Agency (NSTDA), Thailand

09:30 The Influence of freeze drying conditions on microstructural changes of food products (EPF375) Pp257

V.P. Oikonomopoulou^a, M.K. Krokida^a, V.T. Karathanos^b

^aDepartment of Chemical Engineering, National Technical University of Athens, Greece, ^bDepartment of Nutrition, Harokopio University, Greece

09:45 The effect of supercritical fluid extraction parameters on the nutmeg oil extraction and its cytotoxic and antiangiogenic properties (EPF700) Pp259

S.S. Al-Rawi^a, A.H. Ibrahim^b, N.N. Ab Rahman^c, **M.M. Ben Nama^c**, A.M.S. Abdul Majid^b, M. O. Ab Kadir^a

^aDepartment of Environmental Technology, School of Industrial Technology, Universiti Sains Malaysia, Malaysia, ^bDepartment of Pharmacology, School of Pharmaceutical Sciences, Universiti Sains Malaysia, Malaysia, ^cDepartment of Biology, School of Distance Education, Universiti Sains Malaysia, Malaysia

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WEDNESDAY, MAY 25th

08:00-10:15

Session 3: Food product development

FPE 4

Room Erato

Chairs: K. Niranjana, L.M. Cunha, E. Lazos

- 08:00** **Engineering deep fat frying for favourable health impact (FPE1216) Pp655**
K. Niranjana, A.A. Tarmizi, M.K. Al-Khusaibi
Department of Food and Nutritional Sciences, University of Reading, UK
- 08:30** **Probiotic cashew apple juice (FPE924) Pp657**
A.L. Fernandes Pereira, T. Cavalcante Maciel, **S. Rodrigues**
Food Technology Department, Federal University of Ceará, Brazil
- 08:45** **Novel source of pectin from young sugar palm by microwave assisted extraction (FPE642) Pp659**
S. Rungronmitchai, G. Leungvongpaisan
Department of Chemical Engineering, Faculty of Engineering, Thammasat University, Thailand
- 09:00** **Application of Multicriteria Decision Methods (MCDM) for the development of functional food products in Venezuela (FPE160) Pp661**
A. Harrar de Dienes^a, M. García Melón^b, J. Alcaide Marzal^b
^aUniversidad Metropolitana, Venezuela, ^bUniversidad Politécnica de Valencia, Spain
- 09:15** **Modification of food products properties by use of transglutaminase (FPE83) Pp663**
A.G. Shleikin, N.P. Danilov, G.V. Ternovskoy
Saint-Petersburg State University of Refrigeration & Food Engineering, Russia
- 09:30** **Application of the flash-profile technique to gain consumer insights regarding a newly developed symbiotic yoghurt with honey (FPE1173) Pp665**
S. Gomes^a, **L.M. Cunha^a**, R. Costa Lima^b, A. Gomes^c
^aFaculty of Sciences, University of Porto, Portugal, ^bSense Test, Lda., Portugal, ^cUniversidade Catolica Portuguesa, Portugal
- 09:45** **Development of salt double fortified with iodine and iron for the prevention and cure of micronutrient deficiency diseases (FPE28) Pp667**
L.L. Diosady
Department of Chemical Engineering and Applied Chemistry, University of Toronto, Canada
- 10:00** **Development of an extruded snack from the legume *Vicia faba minor* (FPE598) Pp669**
J. Smith, A. Hardacre
Institute of Food Nutrition and Human Health, Massey University, New Zealand

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WEDNESDAY, MAY 25th

08:00-10:00

Session 4: Bioprocess engineering

NFP 5

Room Hesperides

Chairs: U. Kulozik, R.A. Carvalho, P. Christakopoulos

08:00 **Detoxification of sago trunk hydrolysate using activated charcoal for xylitol production (NFP1003) Pp387**

S.M. Mustapa Kamal^a, N.L. Mohamad^a, A.G. Liew Abdullah^b, N. Abdullah^b

^aDepartment of Process and Food Engineering, ^bDepartment of Chemical and Environmental Engineering, Faculty of Engineering, Universiti Putra Malaysia, Malaysia

08:15 **Aspergillus niger biofilms for lipases production, applying fibrous network of Opuntia ficus-indica (NFP297) Pp389**

C.J.C. Cano, D.N. Uresti, A. Iliná, H.J.L. Martínez

Facultad de Ciencias Químicas, Universidad Autónoma de Coahuila, México

08:30 **Effects of physical stress factors on isoflavonoid biosynthesis from the soy plant tissue culture (NFP546) Pp391**

A. Gueven^a, D. Knorr^b

^aTunceli University, Turkey, ^bBerlin University of Technology, Germany

08:45 **A flow cytometric approach to monitor the effects of gentle preservation techniques in the postharvest chain (NFP672) Pp393**

A. Fröhling^a, M. Baier^a, S. Klocke^a, D. Knorr^b, O. Schlüter^a

^aLeibniz Institute for Agricultural Engineering Potsdam, Department of Horticultural Engineering, Germany,

^bTechnical University of Berlin, Department of Food Biotechnology and Food Process Engineering, Germany

09:00 **Development of an integrative process for the production of bioactive peptides from whey by proteolytic commercial mixtures (NFP889) Pp395**

F.T. Welderufael, P. Jauregi

The University of Reading, UK

09:15 **Influence of the milieu conditions on trypsin hydrolysis of β -lactoglobulin (NFP465) Pp397**

S.C. Cheison^{a,b}, J. Brand^a, E. Leeb^a, U. Kulozik^c

^aZIEL-Junior Research Group: Bioactive Peptides and Protein Technology, Technische Universität München, Germany,

^bSchool of Public Health and Community Development, Maseno University, Kenya, ^cZIEL Technology Section, Technische Universität München, Germany

09:30 **Design and techno-economic evaluation of microbial biopolymer production from food industry wastes and agricultural crops (FPD679) Pp399**

I. Lopez García^a, M.P. Dorado Perez^a, J.A. López^b, M.A. Villar^b, S. Yanniotis^c, A. Koutinas^c

^aDepartment of Chemical Physics and Applied Thermodynamics, University of Cordoba, Spain, ^bPlanta Piloto de Ingeniería Química, PLAPIQUI-UNS-CONICET, Argentina, ^cDepartment of Food Science and Technology, Agricultural University of Athens, Greece

09:45 **Production of galactooligosaccharides and biosurfactants by Pseudozyma tsukubaensis using cassava wastewater as an alternative pre-inoculum medium (FPE799) Pp401**

A.E. Cavalcante Fai^a, A.P. Resende Simiqueli^a, G. Ghiselli^b, G.M. Pastore^a

^aDepartment of Food Science, Faculty of Food Engineering, University of Campinas, Brazil, ^bDepartment of Food Engineering, Faculty of Food Engineering, University of Campinas, Brazil

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WEDNESDAY, MAY 25th

08:00-10:15

Session 5: Mechanical processing of foods

AFT 6

Room Santorini

Chairs: Shujun Li, S.M.A. Razavi, K. Adamopoulos

08:00 **On flow-fields in a high pressure homogenizer and its implication on drop fragmentation (AFT944) Pp587**

A. Håkansson^a, L. Fuchs^b, F. Innings^c, J. Revstedt^b, C. Trägårdh^a, B. Bergenståhl^a

^aFood Technology, Lund University, Sweden, ^bEnergy Sciences, Lund University, Sweden, ^cTetra Pak Processing Systems, Sweden

08:15 **Can protein functionalities be enhanced by high-pressure homogenization? - A study on functional properties of lupin proteins (AFT517) Pp589**

S. Bader, J. Bez, P. Eisner

Fraunhofer Institute for Process Engineering and Packaging, Freising, Germany

08:30 **Homogenisation in the dairy process – conventional processes and novel techniques (AFT139) Pp591**

K. Köhler, H.P. Schuchmann

KIT, LVT, Germany

08:45 **Understanding and analysis of wear in homogenizers for processing liquid food (AFT457) Pp593**

F. Innings^a, E. Hultman^a, F. Forsberg^a, B. Prakash^b

^aTetra Pak Processing Systems, Sweden, ^bLuleå University of Technology, Sweden

09:00 **Experimental laboratory-scale study of thermo-mechanical treatment of whey protein solution in industrial process-like conditions (AFT302) Pp595**

N. Erabit^a, G. Alvarez^a, D. Flick^b

^aCemagref, Refrigeration Processes Engineering Research Unit, France, ^bAgroParisTech, UMR1145 Ingénierie Procédés Aliments, France

09:15 **Extrusion processing of DDGS based aquaculture feeds (AFT1290) Pp597**

K. Muthukumarappan^a, F. Ayadi^a, K. A. Rosentrater^b

^aDepartment of Agricultural and Biosystems Engineering, USA, ^bNorth Central Agricultural Research Laboratory, USA

09:30 **Preliminary study on microbeads production by co-extrusion technology (FPE1259) Pp599**

L. Piazza, T. Roversi

Department of Food Science and Microbiology, University of Milan, Italy

09:45 **Gas-assisted oilseed pressing – design and tests with a novel high-pressure screw press (AFT247) Pp601**

A. Pietsch^a, R. Eggers^b

^aEurotechnica GmbH, Germany, ^bTechnical University Hamburg, Germany

10:00 **Experimental and CFD studies of fluid dynamic gauging in cross-flow microfiltration systems (HDO494) Pp603**

W. Lewis, J. Chew, M. Bird

Department of Chemical Engineering, University of Bath, UK

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10:15-11:35

Coffee Break

WEDNESDAY, MAY 25th 11:15-13:15

WEDNESDAY, MAY 25th

11:15-13:15

Session 1: Food rheology

FMS 9

Room Terpsichore (A)

Chairs: M.A. Rao, A. Mullet

11:15 Rheological and structural characteristics of nanometer-scale food protein fibril dispersions and gels (FMS1299) Pp131

S.M. Loveday^a, M.A. Rao^b, H. Singh^c

^aThe Riddet Institute, Massey University, New Zealand, ^bCornell University, USA, ^cThe Riddet Institute, Massey University, New Zealand

11:45 Influence of wheat bran on wheat dough rheology and subsequent texture of bread (FMS989) Pp133

K. Katina^a, H. Chiron^b, A.-L. Requerre^b, L. Chanier^b, K. Poutanen^a, G. Del Valle^b

^aVTT, Finland, ^bINRA, France

12:00 Rheological modelling of polymeric systems for foods: Experiments and simulations (FMS1027) Pp135

P.H.S. Santos^a, M.A. Carignano^b, O.H. Campanella^a

^aDepartment of Agricultural and Biological Engineering, Purdue University, USA, ^bDepartment of Biomedical Engineering and Chemistry of Life Processes Institute, Northwestern University, USA

12:15 Viscoelastic characterization of fluid and gel like food emulsions stabilized with hydrocolloids (FMS332) Pp137

G. Lorenzo^{a,b}, N.E. Zaritzky^{a,b}, A.N. Califano^a

^aCentro de Investigación y Desarrollo en Crioteología de Alimentos (CIDCA), Facultad de Ingeniería, UNLP, Argentina, ^bDepartamento de Ingeniería Química, Facultad de Ingeniería, UNLP, Argentina

12:30 Non-destructive characterization of food microstructure and composition by spatially-resolved spectroscopy (FMS940) Pp139

N. Nguyen Do Trong^a, M. Tsuta^{a,b}, E. Herremans^a, R. Watté^a, C. Erkinbaev^a, E. Verhoelst^a, P. Verboven^a, B.M. Nicolai^a, W. Saeys^a

^aDivision of Mechatronics, Biostatistics and Sensors (MeBioS), Department of Biosystems, K.U. Leuven, Belgium, ^bNational Food Research Institute, Tsukuba, Ibaraki, Japan

12:45 Characteristics of Hydroxy Propyl Methyl Cellulose (HPMC) based edible film developed for blueberry coatings (FMS215) Pp141

F. Osorio, P. Molina, S. Matiacevich, J. Enrione, O. Skurtys

Dpto. Ciencia y Tecnología Alimentos, Facultad Tecnológica, Universidad de Santiago de Chile-USACH, Chile

13:00 Using particle tracking to probe the local dynamics of barley β -glucan solutions (FMS756) Pp143

T. Moschakis, A. Lazaridou, C.G. Biliaderis

First Department of Food Science and Technology, School of Agriculture, Aristotle University, Greece

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WEDNESDAY, MAY 25th

11:15-13:15

Session 2: Modeling and simulation -II-

MCF 4

Room Terpsichore (B)

Chairs: D.R. Heldman, F. Payne

11:15 Food preservation process design (MCF250) Pp307

D.R. Heldman

Heldman Associates, USA

11:45 Empirical modeling for spray drying process of sticky and nonsticky products (MCF1028) Pp309

L. Woun Tan^a, M. Nordin Ibrahim^a, R. Kamil^b, F. Saleena Taip^a

^aDepartment of Process and Food Engineering, Universiti Putra Malaysia, Malaysia, ^bDepartment of Electrical and Electronic Engineering, Universiti Putra Malaysia, Malaysia

12:00 Optimal design of experiments for the modelling of food processes (MCF269) Pp311

D. Goujot^{a,b}, X. Meyer^c, F. Courtois^{a,b}

^aINRA, UMR1145 Ingénierie Procédés Aliments, France, ^bAgroParisTech, UMR1145 Ingénierie Procédés Aliments, France, ^cLaboratoire de Génie Chimique, Université de Toulouse, France

12:15 Artificial neural network model flexibly applicable to retort processes under various operating conditions (AFT423) Pp313

Y. Llave, T. Hagiwara, T. Sakiyama

Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

12:30 Dynamic simulation of batch freezing tunnels for fish using Modelica (MCF632) Pp315

H.T. Walnum^a, T. Andresen^a, K. Widell^b

^aSINTEF Energy Research, Norway, ^bNorwegian University of Technology and Science, Norway

12:45 Light backscatter applications in milk and dairy foods processing (MCF412) Pp317

F. Payne^a, M. Castillo^b, M.-G. Danao^c

^aBiosystems and Agricultural Engineering, University of Kentucky, USA, ^bFood Science Department, University Autònoma de Barcelona, Spain, ^cAgricultural & Biological Engineering, University of Illinois, USA

13:00 Finite element modelling of fish cooking by microwave (AFT299) Pp319

S. Liu, M. Fukuoka, N. Sakai

Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

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WEDNESDAY, MAY 25th

11:15-13:15

Session 3: Engineering of delivery systems of bioactive foods

FPE 5

Room Erato

Chairs: H. Schubert, E. Windhab

11:15 **Personalized nutrition - A challenging global concept and its implications on innovations in food processing (FPE933) Pp671**

E.J. Windhab

Swiss Federal Institute of Technology Zürich (ETH), Switzerland

11:45 **Encapsulation and delivery of carotenoids-rich extract from tomato pomace in a prebiotic matrix (FPE1102) Pp673**

C. Duarte^a, S. Beirão-da-Costa^{a,b}, A.I. Bourbon^b, A.C. Pinheiro^b, A.T. Serra^c, M. Moldão-Martins^a, A.A. Vicente^b, C.M.M. Duarte^c, **M.L. Beirão-da-Costa^a**

^aCEER, Biosystems Engineering, ISA, Technical University of Lisbon, Portugal, ^bIBB, Institute for Biotechnology and Bioengineering, Centre of Biological Engineering, University of Minho, Portugal, ^cInstituto de Biologia Experimental e Tecnológica, Avenida da República, Quinta-do-Marquês, Estação Agronómica Nacional, Portugal

12:00 **Microencapsulation of bioactive bilberry anthocyanins by means of whey protein gels (FPE137) Pp675**

M. Betz, U. Kulozik

Research Center for Nutrition and Food Sciences (ZIEL), Department Technology, Technische Universität München, Germany

12:15 **Microencapsulation of macadamia oil by spray drying (FPE127) Pp677**

K. Laohasongkram, T. Mahamaktudsanee, S. Chaiwanichsiri

Department of Food Technology, Chulalongkorn University, Thailand

12:30 **Production and evaluation of alginate-chitosan microcapsules as an enteric delivery vehicle for probiotic bacteria (FPE819) Pp679**

M.T. Cook^{a,b}, V.V. Khutoryanskiy^b, **D. Charalampopoulos^a**

^aDepartment of Food and Nutritional Sciences, University of Reading, UK, ^bReading School of Pharmacy, University of Reading, UK

12:45 **Encapsulation of bioactive compounds in nanoemulsion-based delivery systems (FPE794) Pp681**

F. Donsi^{a,b}, M. Sessa^a, G. Ferrari^{a,b}, A. Mgaidi^c, H. Mediouni^c

^aDepartment of Industrial Engineering, University of Salerno, Italy, ^bProdAl Scari-Competence Center on Agro-Food Productions, University of Salerno, Italy, ^cFaculty of Science, University of Tunis "El Manar", Tunisia

13:00 **Maillard-reaction based nano-capsules for protection of water-insoluble nutraceuticals in clear drinks (FPE467) Pp683**

G. Markman, Y.D. Livney

The Faculty of Biotechnology and Food Engineering, The Technion, Israel Institute of Technology, Israel

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WEDNESDAY, MAY 25th

11:15-13:15

Session 4: Emerging technologies -III-

NFP 6

Room Hesperides

Chairs: D. Knorr, M.O. Balaban

- 11:15 Emerging technologies for targeted food processing (NFP1263) P419**
D. Knorr^a, H. Jaeger^a, K. Reineke^a, K. Schoessler^a, O. Schlueter^b
^aTechnical University of Berlin, Department of Food Biotechnology and Food Process Engineering, Germany, ^bLeibniz Institute for Agricultural Engineering Potsdam, Department of Horticultural Engineering, Germany
- 11:45 Effect of UV irradiation on the properties of whey protein solutions treated using a novel UV light reactor (NFP1132) P421**
E. Kristo, A. Hazizaj, M. Corredig
Department of Food Science, University of Guelph, Canada
- 12:00 Modification of polyphenols and cuticular surface lipids of Kale (*B. oleracea convar. sabellica*) with non-thermal oxygen plasma gaseous species (NFP306) P423**
F. Grzegorzewski^b, M. Zietz^b, S. Rohn^c, W. Kroh Lothar^b, O. Schlueter^a
^aLeibniz Institute of Agricultural Engineering Potsdam-Bornim, Germany, ^bTechnical University Berlin, School of Process Science, Germany, ^cUniversity of Hamburg, Department of Chemistry, Institute of Food Chemistry, Germany
- 12:15 Dense phase carbon dioxide processing of liquid foods: a review (NFP45) P425**
M.O. Balaban^a, G. Ferrentino^b
^aUniversity of Alaska, USA, ^bUniversity of Trento, Italy
- 12:30 Diagnostic and efficacy characterisation of a novel in-package cold atmospheric plasma system (NFP520) P427**
V.P. Valdramidis^{a,b}, E. Byrne^a, J. Connolly^c, K.-A.G. Karatzas^d, K. Keener^e, J.-P. Mosnier^c, P.J. Cullen^a
^aSchool of Food Science and Environmental Health, Dublin Institute of Technology, Ireland, ^bBiosystems Engineering, School of Agriculture, Food Science and Veterinary Medicine, University College Dublin, Ireland, ^cSchool of Physical Sciences and NCPST, Dublin City University, Ireland, ^dDepartment of Microbiology, National University of Ireland, Ireland, ^eFood Science, Purdue University, US
- 12:45 Ultra High Pressure Homogenization (UHPH) treatment of vegetable milks: improving hygienic and colloidal stability (FMS480) P429**
V. Ferragut, M. Hernández-Herrero, F. Poliselí, D. Valencia, B. Guamis
Centre Especial de Recerca Planta de Tecnologia dels Aliments (CERPTA), XiT, Departament de Ciència Animal i dels Aliments, Facultat de Veterinària, edifici V, Universitat Autònoma de Barcelona, Spain
- 13:00 Adjustment of milling, mash electroporation and pressing for the development of a Pulsed Electric Field (PEF) assisted juice processing in industrial scale (NFP885) P431**
H. Jaeger, M. Schulz, P. Lu, D. Knorr
Technical University of Berlin, Department of Food Biotechnology and Food Process Engineering, Germany

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WEDNESDAY, MAY 25th

11:15-13:15

Session 5: Reaction kinetics in food processing

MFS 3

Room Santorini

Chairs: C.L.M. Silva, W. Zhou, G. Efremov

11:15 **Dynamic approach for assessing food quality and safety characteristics: the case of processed foods (MFS653) P479**

T.R.S. Brandão, C.L.M. Silva

Centro de Biotecnologia e Química Fina, Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Portugal

11:45 **Interest of modeling heat transfer inside a reactor to estimate kinetic parameters (MFS477) P481**

N. Jiménez^a, P. Bohuon^b, M. Dornier^b, C. Bonazzi^c, F. Vaillant^d

^aUniversidad de Costa Rica, Costa Rica, ^bMontpellier SupAgro, UMR Qualisud, France, ^cINRA, UMR1145 Ingénierie Procédés Aliments, France, ^dCIRAD, UMR Qualisud, France

12:00 **Methodology for extracting an observable reaction pathway for the simulation and control of Maillard reaction during baking of sponge-cake like products (MFS682) P483**

C. Bonazzi^{a,b}, M. Courel^{a,b}, S. Fehaili^{b,a}, B. Broyart^{b,a}, B. Rega^{b,a}, X.M. Meyer^c, P. Giampaoli^{b,a}

^aINRA, UMR1145 Ingénierie Procédés Aliments, France, ^bAgroParisTech, UMR1145 Ingénierie Procédés Aliments, France, ^cUniversité de Toulouse, Laboratoire de Génie Chimique CNRS/INPT/UPS, France

12:15 **Investigation of acrylamide formation in curcumin-asparagine model system (MFS712) P485**

A. Hamzalioglu^a, V. Gökmen^{a,b}

^aDepartment of Food Engineering, Hacettepe University, Turkey, ^bFood Research Center, Hacettepe University, Turkey

12:30 **Modeling the stability of green tea catechins EGCG and ECG during the biscuit making process (MFS853) P487**

A. Sharma, W. Zhou

Food Science and Technology Programme, Department of Chemistry, National University of Singapore, Singapore

12:45 **Predicting the extent of Maillard reactions in infant formula during sterilization by ohmic heating (MFS433) P489**

M. Courel^a, S. Roux^b, I. Birlouez-Aragon^c, J.-P. Pain^b

^aUMR1145 Ingénierie Procédés Aliments, France, ^bUMR Qualisud, Université Montpellier II, France, ^cSpectralys Innovation, France

13:00 **Application of experiment design method for determination of drying kinetics (FMS1262) Pp491**

G. Efremov^a, T. Kudra^b

^aMoscow State Open University, Russia, ^bCANMET Energy Technology Centre, Canada

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13:15-14:30

Lunch Break

WEDNESDAY, MAY 25th

14:30-16:30

WEDNESDAY, MAY 25th

14:30-16:30

Session 1: State and phase transitions of food materials-relation to quality

**FMS 10
Room Terpsichore (A)**

Chairs: Y.H. Roos, P. Buera, M.S. Rahman

- 14:30 Relaxations, glass transition and engineering properties of food solids (FMS773) Pp145**
Y.H. Roos
School of Food and Nutritional Sciences, University College Cork, Ireland
- 15:00 Modelling crystal polymorphisms in chocolate processing (FMS1123) Pp147**
S. Bakalis, B.J.D. Le Révérend, N.Z. Rois Anwar, P.J. Fryer
School of Chemical Engineering, University of Birmingham, UK
- 15:15 The role of the glassy state in production and storage of freeze-dried starter cultures (FMS456) Pp149**
M. Aschenbrenner, U. Kulozik, P. Först
Food Process Engineering and Dairy Technology, TU München, Germany
- 15:30 Maillard reaction markers in cornflake production. Influence of process conditions and formulation (FMS896) Pp151**
A. Farroni^a, G. Lagorio^b, P. Buera^b
^aLaboratorio de Calidad de Alimentos. INTA Pergamino, ^bDpto. de Química Inorgánica, Analítica y Qca. Física, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, ^cDpto. de Industrias, Facultad de Ciencias Exactas y Naturales. Universidad de Buenos Aires
- 15:45 Development of state diagram of bovine gelatine by measuring thermal characteristics using Differential Scanning Calorimetry (DSC) (FMS11) Pp153**
M.S. Rahman^a, G. Al-Saidi^a, N. Guizani^a, A. Abdullah^b
^aDepartment of Food Science, College of Agricultural and Marine Sciences, Sultan Qaboos University, Oman, ^bFaculty of Science and Technology, Universiti Kebangsaan Malaysia, Malaysia
- 16:00 Control of resistant starch content of cookie by pre-dehydration treatment (FMS33) Pp155**
K. Kawai, H. Kawai, Y. Hagura
Department of Biofunctional Science and Technology, Hiroshima University, Japan
- 16:15 Stability of α -tocopherol in amorphous freeze-dried carbohydrate-protein systems (FMS200) Pp157**
Y. Zhou, Y.H. Roos
University College Cork, Ireland

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WEDNESDAY, MAY 25th

14:30-16:30

Session 2: Modeling of transport phenomena -II-

MCF 5

Room Terpsichore (B)

Chairs: F. Erdogdu, M. Havet

14:30 **Mathematical modeling of transport phenomena for simulation and optimization of food processing operations (MCF31) Pp331**

F. Erdoğan

Department of Food Engineering, University of Mersin, Turkey

15:00 **A hybrid CST/Neural network model for moisture prediction in milk powder during drying in a spouted bed (MCF157) Pp333**

A.B. da Silva^a, A.R.F. de Almeida^b, F.B. Freire^a, J.T. Freire^a

^aChemical Engineering Department, Federal University of São Carlos, Brazil, ^bFederal University of Pampa, Brazil

15:15 **Simulations of coupled electro-, fluid- and thermo-dynamics and lactoperoxidase inactivation during continuous pulsed electric field treatments (MCF434) Pp335**

R. Buckow, J. Semrau, Q. Sui, K. Knoerzer

CSIRO Food and Nutritional Sciences, Australia

15:30 **A discrete population balance to simulate the particle size distribution in a bolus of chewed rice (MCF600) Pp337**

E.M. Gray-Stuart^{a,b}, J.R. Jones^b, J.E. Bronlund^{a,b}, A. Moongnarm^c, M.P. Morgerstern^d

^aThe Riddet Institute, Massey University, New Zealand, ^bSchool of Engineering and Advance Technology, Massey University, New Zealand, ^cDepartment of Food Technology and Nutrition, Mahasarakham University, Thailand, ^dFood Structure & Engineering Team, The New Zealand Institute for Plant & Food Research Limited, New Zealand

15:45 **Electrohydrodynamic modelling and its application to heat transfer enhancement (MCF687) Pp339**

M. Havet, S.'A. Ould Ahmedou

ONIRIS, CNRS, GEPEA, UMR 6144, LUNAM Université, France

16:00 **CFD simulations in still cans filled with solid food items in liquid (MCF991) Pp341**

A. Dimou, N.G. Stoforos, S. Yanniotis

Department of Food Science and Technology, Agricultural University of Athens, Greece

16:15 **Modelling of beer microfiltration for process control (MCF939) Pp343**

M. Vollebregt, R. van der Sman

Food & Biobased Research, The Netherlands

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WEDNESDAY, MAY 25th

14:30-16:30

Session 3: Emerging technologies -IV-

NFP 7

Room Hesperides

Chairs: S.K. Sastry, X. Liao, J.M. del Valle

14:30 **Ohmic and moderate electric field processing: developments and new applications (NFP121) Pp433**

S.K. Sastry^a, M. Shynkaryk^a, R. Somavat^b

^aThe Ohio State University, Columbus, USA, ^bAbbott Nutrition, Columbus, USA

15:00 **Exploring the heating patterns of multiphase foods in a continuous flow, simultaneous microwave and ohmic combination heater (NFP1045) Pp435**

L.T. Nguyen^a, W. Choi^a, S.H. Lee^b, S. Jun^a

^aDepartment of Human Nutrition, Food and Animal Sciences, University of Hawaii, USA, ^bDepartment of Molecular Biosciences and Bioengineering, University of Hawaii, USA

15:15 **Understanding enzyme inactivation mechanisms during pulsed electric field treatments (NFP1154) Pp437**

N. Meneses, H. Jaeger, D. Knorr

Department of Food Biotechnology and Food Process Engineering, Berlin University of Technology, Germany

15:30 **Enzyme inactivation in food processing using high pressure carbon dioxide technology (NFP265) Pp439**

W. Hu, L. Zhou, Z. Xu, Y. Zhang, X. Liao

College of Food Science and Nutritional Engineering, China Agricultural University, China

15:45 **Influences of ultrasound and ohmic heating on growth of Sake yeast (NFP132) Pp441**

H. Hu^a, Y. Yonezawa^b, A. Matsuda^b, N. Ishida^a, A. Noguchi^a

^aIshikawa Prefectural University, Japan, ^bIndustrial Research Institute of Ishikawa, Japan

16:00 **Supercritical extraction of petals and pellets of marigold flowers using ethanol-modified CO₂ (NFP1103) Pp443**

K. Araus^a, F. Temelli^b, J.M. del Valle^a, J.C. de la Fuente^{c,d}, P. Roberts^e

^aDepartamento de Ingeniería Química y Bioprocesos, Pontificia Universidad Católica de Chile, Chile, ^bDepartment of Agricultural, Food and Nutritional Science, University of Alberta, Canada, ^cDepartamento de Ingeniería Química y Ambiental, Universidad Técnica Federico Santa María, Chile, ^dCentro Regional de Estudios en Alimentos Saludables, Chile, ^eDepartamento de Ciencia de Alimentos y Tecnología Química, Universidad de Chile, Chile

16:15 **Effect of electric field on some functional properties on α -lactalbumin bovine analyzed as well with circular dichroism (NFP373) Pp445**

R.L. Maria Reyna^a, R. de la Torre R. René^a, H. Sánchez Humberto^b, H. Arana Andrés

^aCIBA-IPN, Centro de Investigación en Biotecnología Aplicada-IPN, México, ^bENCB-IPN, México

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WEDNESDAY, MAY 25th

14:30-16:30

Session 4: Nut processing and coffee roasting

FMS 11

Room Hesperides

Chairs: H. Schwartzberg, R.P. Singh

- 14:30** **Batch coffee roasting: roasting energy use: reducing that use (FPD260) Pp159**
H. Schwartzberg
Food Science Department, University of Massachusetts, USA
- 14:55** **Predictive modelling of textural quality of almonds during commercial storage and distribution (MFS292) Pp161**
L.Z. Taitano, R.P.Singh
Department of Biological and Agricultural Engineering, University of California, U.S.A.
- 15:15** **X-ray imaging for fungal necrotic spot detection in pistachio nuts (MCF990) Pp163**
S. Yanniotis^a, A. Proshlyakov^b, A. Revithi^a, M. Georgiadou^a, J. Blahovec^b
^a*Department of Food Science and Technology, Agricultural University of Athens, Greece,* ^b*Department of Agricultural Engineering, Prague University of Life Sciences, Czech Republic*
- 15:30** **Nanoemulsions of grape marc extract as natural additives to improve hazelnut paste shelf-life (FPE676) Pp165**
D. Amendola^a, F. Donsi^b, M. Sessa^b, G. Ferrari^b, D.M. De Faveri^a, G. Spigno^a
^a*Institute Of Oenology and Food Engineering, Università Cattolica Sacro Cuore, Italy,* ^b*Department of Chemical and Food Engineering, University of Salerno, Italy*
- 15:45** **Effect of the roasting process on glass transition and phase transition of Colombian Arabica coffee beans (FMS125) Pp167**
W. Rivera^a, X. Velasco^a, C. Galvez^a, C. Rincon^a, A. Rosales^b, P. Arango^b
^a*Universidad del Cauca, Colombia,* ^b*Universidad Nacional de Colombia – Sede Manizales, Colombia*
- 16:00** **Determination of aflatoxin level in peanut paste using Fourier transform mid-infrared spectroscopy with attenuated total reflection (MFS1244) Pp169**
H. Kaya-Celiker^a, P. Kumar Mallikarjunan^a, O. Dalay^b
^a*Biological Systems Engineering, Virginia Polytechnic Institute and State University, USA,* ^b*Virginia Bioinformatics Institute, Virginia Polytechnic Institute and State University, USA*
- 16:15** **An artificial neural network modelling based optimisation method: A pistachio colour control during roasting process (MCF608) Pp171**
B. Lamrini^b, R. Yeganeh^{a,b}, G. Trystram^a
^a*UMR 1145 (GénIAL), AgroParisTech, INRA, France,* ^b*Department of Farm Machinery, Faculty of Agricultural Engineering, Ilam University, Iran*

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WEDNESDAY, MAY 25th

14:30-16:30

Session 5: Food product and process applications

FPP 1

Room Santorini

Chairs: V. Nedovic, D. Torreggiani, S. Marousis

14:30 An overview of encapsulation technologies for food applications (FPE1305) Pp173

V. Nedovic^a, A. Kalusevic^a, V. Manojlovic^b, B. Bugarski^b

^aDepartment of Food Technology and Biochemistry, University of Belgrade, Serbia, ^bDepartment of Chemical Engineering, University of Belgrade, Serbia

15:00 Formulation of banana aroma impact ester in water-based microemulsion nanodelivery system for flavoring applications using sucrose laurate surfactant (FMS54) Pp175

A.E. Edris^a, C.R. Malone^b

^aAroma & Flavor Chemistry Department, National Research Centre, Egypt, ^bSchool of Chemistry & Pharmacy, University of Reading, UK

15:15 Applicability of monoglyceride-oil-water gel to produce low-saturated fat products (FPE71) Pp177

S. Calligaris, S. Da Pieve, B. Quarta, L. Manzocco, M. Anese, M.C. Nicoli

Dipartimento di Scienze degli Alimenti Università degli Studi di Udine, Italy

15:30 pH reduction of vegetables by the application of the vacuum impregnation method (AFT533) Pp179

A. Derossi, T. De Pilli, M.P. La Penna, C. Severini

Department of Food Science University of Foggia, Italy

15:45 Nutritional effects of folic acid controlled release from mesoporous materials (FMS1286) Pp181

J. Barat^a, É. Pérez-Esteve^a, A. Bernardos^{a,b}, R. Martínez-Máñez^b

^aUniversidad Politécnica De Valencia, Food Technology Department, Spain, ^bUniversidad Politécnica De Valencia, Institute of Molecular Recognition and Technological Development, Spain

16:00 Enzymatic formation of copolymers and block-copolymers based on derivatized polysaccharides (FMS466) Pp183

A. M. Moscovici, E. Shimoni

The Interdepartmental Program in Biotechnology, Biotechnology & Food Engineering, Technion – Israel Institute of Technology, Israel

16:15 Assessing the use of Dielectric Spectroscopy to analyse composition and component mobility in a model cheese system (FMS335) Pp185

J. Smith^{a,b}, A. Carr^a, M. Golding^a, D. Reid^b, L. Zhang^b

^aInstitute of Food Nutrition and Human Health, Massey University, New Zealand, ^bFonterra Research Centre, New Zealand

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16:30-17:00

Coffee Break

WEDNESDAY, MAY 25th 17:00-18:30

WEDNESDAY, MAY 25th

17:00-18:30

Session 1: Modeling and simulation -III-

MCF 6

Room Terpsichore (A)

Chairs: G. Trystram, G. Barbosa-Canovas

17:00 **New modelling stakes and tools to face complex food systems (MCF1304) Pp321**

G. Trystram^a, B. Broyart^a, N. Perrot^b, C. Trela^b

^aAgroParisTech, INRA, Food and Process Engineering, France, ^bAgroParisTech, INRA, UMR782, France

17:30 **Modelling the formation of the fat droplets interface during homogenisation in order to describe texture (MCF498) Pp323**

J. Foucquier^a, S. Gaucel^a, C. Surel^b, A. Riaublanc^b, C. Baudrit^a, N. Perrot^a

^aUMR782 Génie et Microbiologie des Procédés Alimentaires, AgroParisTech, France, ^bUR1268 BIA Biopolymères, Interactions, Assemblages, INRA, France

17:45 **The complex system science for optimal strategy of management of a food system: the camembert cheese ripening (MCF136) Pp325**

N. Perrot^{a,b}, S. Mesmoudi^b, R. Reuillon^b, E. Lutton^c, I. Alvarez^d

^aUMR 782 Génie Microbiologique et Procédés Alimentaires, AgroParisTech, France, ^bInstitut des Systèmes complexes de Paris Ile de France, France, ^cINRIA, Saclay Ile de France, France, ^dCemagref, France

18:00 **Analysis and modeling of drying kinetics of potatoes considering the shrinkage (MCF1214) Pp327**

M.S. Bacelos^a, P.I.F. Almeida^b

^aDepartamento de Engenharias e Computação, Universidade Federal do Espírito Santo, Brazil, ^bDepartamento de Engenharia Química, Universidade Federal de São Carlos, Brazil

18:15 **The absorption of 2-acetyl-1-pyrroline during cooking of rice (*Oryza sativa* L.) with Pandan (*Pandanus amaryllifolius* Roxb.) leaves (MCF678) Pp329**

F. Yahya^{a,b}, P.J. Fryer^a, S. Bakalis^a

^aSchool of Chemical Engineering, University of Birmingham, UK, ^bDepartment of Food Science, Faculty of Agriculture and Food Science, Universiti Malaysia, Malaysia

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WEDNESDAY, MAY 25th

17:00-18:30

Session 2: Food waste engineering

FEW 1

Room Terpsichore (B)

Chairs: V. Gekas, A. Koutinas, N.E. Zaritzky

17:00 Membrane technology for the separation and the clarification of food additives recovered from olive mill wastewater (NFP458) Pp737

C.M. Galanakis^a, E. Tornberg^b, V. Gekas^c

^aDepartment of Environmental Engineering, Technical University of Crete, Greece, ^bDepartment of Food Technology, Engineering and Nutrition, Faculty of Engineering, Lund University, Sweden, ^cDepartment of Agricultural Sciences, Biotechnology and Food Science, Cyprus University of Technology, Cyprus

17:15 Production of enzymes by *Bacillus subtilis* using cassava wastewater as substrate (FEW1124) Pp739

A.P. Resende Simiqueli, F.F. Cavalcante Barros, C. Serafini Pereira, B. Caviccholi, G.M. Pastore

Department of Food Science, University of Campinas, Brazil

17:30 Pulsed light as a novel decontamination technology for pesticides residues in wastewaters (FEW702) Pp741

A. Baranda, A. Lasagabaster, M.L. Artíguez, I. Martínez de Marañón

Food Research Division, AZTI-Tecnalia, Spain

17:45 Application of a combined biological and chemical system for the treatment of phosphorus-containing wastewater from the food industry (FEW35) Pp743

C. De Gregorio^a, A.H. Caravelli^a, N.E. Zaritzky^{a,b}

^aCentro de Investigación y Desarrollo en Criotecología de Alimentos (CIDCA), UNLP-CONICET, Argentina, ^bFacultad de Ingeniería, UNLP, Argentina

18:00 Valorisation of confectionary industry wastes for the microbial production of polyhydroxyalkanoates (FEW677) Pp745

J.A. López^a, M.A. Villar^a, I. López García^b, M. Pilar Dorado Pérez^b, F. Tsekoura^c, M. Komaitis^c, S. Papanikolaou^c, A. Koutinas^c

^aPlanta Piloto de Ingeniería Química, PLAPIQUI (UNS-CONICET), Argentina, ^bDepartment of Chemical Physics and Applied Thermodynamics, University of Cordoba, Spain, ^cDepartment of Food Science and Technology, Agricultural University of Athens, Greece

18:15 Effect of configuration of biomass on the behavior of anaerobic batch reactors in pilot-scale treating dairy wastewater (FEW381) Pp747

A.A. Pretti, J. Gaspar Moreno, R.S. de Souza Santana, S.C. de Pinho, G. Tommaso, R. Ribeiro

Department of Food Engineering, School of Animal Science and Food Engineering, University of São Paulo (USP), Brazil

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WEDNESDAY, MAY 25th

17:00-18:45

Session 3: Risk assessment and safety assurance

MFS 4

Room Erato

Chairs: M.H. Zwietering, P.N. Skandamis

- 17:00 **Meta-analysis for quantitative microbiological risk assessment (MFS194) Pp493**
M.H. Zwietering, H.M.W. den Besten
Laboratory of Food Microbiology, Wageningen University, The Netherlands
- 17:30 **Incorporation of microbiological and molecular methods in HACCP monitoring scheme of molds and yeasts in a Greek dairy plant: A case study (MFS718) Pp495**
E. Beletsiotis, D. Ghikas, K. Kalantzi
DELTA FOODS S.A., Greece
- 17:45 **Poisson-gamma and Poisson-lognormal models for the characterisation of within-batch and between-batch variability in microbial counts in foods (MFS182) Pp497**
U. Gonzales-Barron, F. Butler
Biosystems Engineering, UCD School of Agriculture, Food Science and Veterinary Medicine, University College Dublin, Ireland
- 18:00 **The heterogeneous heat stress response of *Escherichia coli* K12 (MFS791) Pp499**
I. Cornet^{a,b}, E. Van Derlinden^a, A.M. Cappuyns^a, W. Bruyninckx^b, A. Kovacs^a, J.F. Van Impe^a
^aBioTeC, Chemical and Biochemical Process Technology and Control, Department of Chemical Engineering, KULeuven, Belgium, ^bArtesis University College, Belgium
- 18:15 **On the influence of the experimental set-up on the heterogeneous heat response of *E. coli* K12 (MFS724) Pp501**
E. Van Derlinden, K. Boons, I. Lule, J. Van Impe
BioTeC - Chemical and Biochemical Process Technology and Control, Katholieke Universiteit Leuven, Belgium
- 18:30 **Modeling the effect of acid and osmotic shifts above and across the growth boundaries on the adaptation and growth of *Listeria monocytogenes* (MFS882) Pp1829**
C.-I.A. Belessi^a, S.I. Merkouri^a, A.S. Gounadaki^a, S. Schwartzman^b, K. Jordan^b, E.H. Drosinos^a, P.N. Skandamis^a
^aLaboratory of Food Quality Control and Hygiene, Department of Food Science and Technology, Agricultural University of Athens, Greece, ^bTeagasc, Dairy Products Research Centre, Dublin

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WEDNESDAY, MAY 25th

17:00-18:45

**Session 4: Management and optimization of the food chain-from
production to consumption**

**MFS 5
Room Hesperides**

Chairs: P. Raspor, B. Tiwari, V. ValDRAMIDIS

17:00 Food chain safety management systems: The impact of good practices (MFS1319) Pp503

P. Raspor

Department of Food Science and Technology, Biotechnical Faculty, University of Ljubljana, Slovenia

17:30 Bayesian networks to explain the effect of label information on product perception (MFS1072) Pp505

V.-A. Phan^a, A.P.W. Kole^b, U. Garczarek^c, M. Dekker^a, M.A.J.S. van Boekel^a

^aProduct Design and Quality Management, Wageningen University, the Netherlands, ^bCentre for Consumer Research, the Netherlands, ^cUnilever Food and Health Research Institute, the Netherlands

17:45 A meta-analysis study of the effect of chilling on prevalence of microbiological indicators on pig carcasses (MFS759) Pp507

D. Bergin, F. Butler

Biosystems Engineering, UCD School of Agriculture, Food Science and Veterinary Medicine, University College Dublin, Ireland

18:00 Milk transport security and traceability system (MFS868) Pp509

F. Payne^a, C. Thompson^b

^aBiosystems and Agricultural Engineering, University of Kentucky, USA, ^bDivision of Regulatory Services, University of Kentucky, USA

18:15 Comparative Life Cycle Assessment (LCA) of production and transport of chilled versus superchilled haddock (*Melanogrammus aeglefinus*) fillets from Norway to France (FEW674) Pp511

I.C. Claussen^a, E. Indergård^b, M. Grinde^b

^aSINTEF Energy research, Norway, ^bDepartment of Energy and Process Engineering, NTNU, the Norwegian University of Science and Technology, Norway

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WEDNESDAY, MAY 25th

17:00-18:30

Session 5: Unit operations for designed foods

FPE 6

Room Santorini

Chairs: S.N. Raphaelides, P. Pittia

- 17:00 Impact of thermal processing on stability of milk glycoproteins (FPE462) Pp685**
N. Siegert, E. Leeb, **U. Kulozik**
Technische Universität München, Food Process Engineering and Dairy Technology, Germany
- 17:15 Processing and product design for natural food products (FPE1272) Pp687**
U. Bobe, M. Michel
Nestlé Research Center, Switzerland
- 17:30 Ability of some food preservation processes to modify the overall nutritional value of food (MCF887) Pp689**
N. Achir^a, P. Bohuon^a, A. Collignan^a, I. Trezzani^b, **G. Trystram^b**
^aUMR 95 QualiSud (CIRAD, Montpellier SupAgro, France, ^bAgroParisTech, INRA, Food Process Engineering, France
- 17:45 Utilization of citrus peel by sub- and supercritical fluid technology (FPE908) Pp691**
M. Goto^a, S. Machmudah^a, M. Sasaki^b, M. Tanaka^c
^aBioelectrics Research Center, Kumamoto University, Japan, ^bGraduate School of Science and Technology, Kumamoto University, Japan
- 18:00 Effect of processing conditions on the physicochemical and structural characteristics of pregelatinised starch-fatty acid-glycerol extrudates (FPE196) Pp693**
S.N. Raphaelides, G. Dimitreli, S. Exarhopoulos, D. Mintzas, A. Lykidou
Department of Food Technology, ATEI of Thessaloniki, Greece
- 18:15 W/O/W emulsions stabilised by fat crystals - Their formulation, stability and ability to retain salt (FMS1054) Pp695**
F. Spyropoulos, S. Fransch-Melnik, I.T. Norton
School of Chemical Engineering, University of Birmingham, UK

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20:30

Congress Gala Dinner

22:00

Student Party

THURSDAY, MAY 26th

08:00-15:00

Registration desk open

THURSDAY, MAY 26th 08:30-10:30

THURSDAY, MAY 26th

08:30-10:30

Session 1: The Marcus Karel Symposium on Food Materials Science

Room Terpsichore (A)

Chairs: T.P. Labuza, D. Knorr

8:30 Professor Marcus Karel: Building paradigms for food engineering and material science as influenced by water, An historical journey (FMS1317) Pp775

T.P. Labuza

Department of Food Science and Nutrition, University of Minnesota, USA

9:00 Relevance of water in the high pressure processing domain (NFP1314) Pp777

D. Knorr, K. Reineke, D. Baier

Technische Universität Berlin, Department of Food Biotechnology and Food Process Engineering, Germany

9:30 Effect of sugar substitute on sucrose crystal growth rate (FMS818) Pp779

J. He^a, R. Bund^b, R. Hartel^b

^aJames Madison Memorial High School, Madison, USA, ^bDepartment of food Science, UW-Madison, USA

9:45 Effect of native crystalline structure of isolated potato starch on gelatinization behavior, then on glyceemic response (FMS61) Pp781

J. Parada, J.M. Aguilera

Universidad Austral De Chile, Pont. Universidad Catolica de Chile

10:00 Effect of pre-crystallization process and solid particle addition on cocoa butter crystallization and resulting microstructure during storage in chocolate model systems (FMS521) Pp783

L. Svanberg^{a,b}, L. Ahrné^a, N. Lorén^a, E. Windhab^b

^aSIK-the Swedish Institute for Food and Biotechnology, Sweden, ^bSwiss Federal Institute of Technology, Institut für Lebensmittelwissenschaften, Switzerland

10:15 Crystallization in amorphous lactose-maltodextrin mixtures (FMS198) Pp785

N. Potes, Y.H. Roos

School of Food and Nutritional Sciences, University College Cork, Ireland

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THURSDAY, MAY 26th

08:30-10:30

Session 2: The Walter Spiess Symposium on Food Processing Technology
Room Erato

Chairs: B. McKenna, H. Lazarides

- 8:30** **The Walter Spiess Symposium on food processing technology (AFT1323) Pp787**
B. McKenna
Emeritus Professor of Food Science, UCD, Past President, EFFoST - European Federation of Food Science & Technology
- 9:00** **Food processing technology in a sustainable food supply chain (AFT1322) Pp789**
H. Lazarides
Department of Food Science and Technology, Faculty of Agriculture, Aristotle University of Thessaloniki, Greece
- 9:30** **Efficacy of some non thermal operations on shelf life of packaged black olive in the absence of brine (NFP102) Pp791**
S. Barut Gök^a, F. Pazir^b
^aNamık Kemal University, Faculty Of Agriculture, Department of Food Engineering, Turkey, ^bEge University, Faculty Of Engineering, Department of Food Engineering, Turkey
- 9:45** **Development of breakfast cereals substitute enriched in bioactive compounds (FEW1050) Pp793**
S. Beirao-da-Costa, M. Fonseca, M.L. Beirao-da-Costa, M. Moldao-Martins
CEER – Biosystems Engineering. ISA. Technical University of Lisbon. Portugal
- 10:00** **Development of infrared heating technology for tomato peeling (NFP1213) Pp795**
Z. Pan^{a,b}, X. Li^b, Y. Wang^{b,c}, G. Atungulu^b, T.H. McHugh^a, M. Delwiche^b
^aProcessed Foods Research Unit, Western Regional Research Center, USDA-ARS, USA, ^bDepartment of Biological and Agricultural Engineering, University of California Davis, USA, ^cCollege of Engineering, China Agricultural University, China
- 10:15** **Osmotic dehydration processing of kiwifruit pericarp tissue studied by means of LF-NMR relaxometry (FMS975) Pp797**
P. Santagapita^{a,b}, L. Laghi^a, V. Panarese^a, U. Tylewicz^a, P. Rocculi^a, M. Dalla Rosa^a
^aAlma Mater Studiorum, University of Bologna, Department of Food Science, Italy, ^bUniversity of Buenos Aires, Faculty of Exact and Natural Sciences, Industry Department, National Council of Scientific and Technical Research (CONICET), Argentina

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10:30-11:00

Coffee Break

THURSDAY, MAY 26th 11:00-13:00

THURSDAY, MAY 26th

11:00-13:00

Session 1: The Henry Schwartzberg Symposium on Food Process Engineering Operations

Room Terpsichore (A)

Chairs: R.P. Singh, G.V. Barbosa-Canovas

11:00 Food engineering education in the digital age (FPD1302) Pp799

R.P. Singh

University of California, USA

11:30 Henry G. Schwartzberg and his enlightening career (FPD1324) Pp801

G.V. Barbosa-Canovas

Washington State University, USA

12:00 Use of Near Infrared spectroscopy for in- and off-line performance determination of continuous and batch powder mixers: Opportunities & challenges (AFT963) Pp803

V. Kehlenbeck

Nestlé PTC Lebensmittelforschung GmbH, Germany

12:15 A novel approach for optimal operation of freeze-drying processes based on time-scale model decomposition (AFT208) Pp805

E. López-Quiroga, A.A. Alonso, L.T. Antelo

Process Engineering Group, IIM-CSIC, Spain

12:30 Stabilization of liquid-liquid interface in membrane contactors: application to the selective extraction of oxygenated terpenes from citrus essential oils (NFP809) Pp807

V. Athes, A. Dupuy, I. Souchon

UMR GMPA 782 Microbiology and Food Process Engineering, AgroParisTech, INRA, France

12:45 Study of Pressurized Fluid Extraction (PFE) conditions to obtain extracts from Brazilian cherry seeds (*Eugenia uniflora* L.) rich in phenolic compounds (NFP769) Pp809

A.L. Oliveira^a, E. Destandau^b, L. Fougère^b, C. Elfakir^b, M. Lafosse^b

^aZEA, Faculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Brazil, ^bICOA, Université d'Orléans, France

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THURSDAY, MAY 26th

11:00-13:00

Session 2: The George Saravacos Symposium on Transport Properties of Foods

Room Erato

Chairs: M.A. Rao, V.T. Karathanos

11:00 Research studies of Prof. Saravacos at Cornell University and their impact on Food Engineering (EPF336) Pp811

M.A. Rao

Cornell University, USA

11:30 Transport properties of foods and their impact in the design of food processes (EPF1325) Pp813

V.T. Karathanos^a, Z.B. Maroulis^b

^aDepartment of Nutrition and Dietetics, Harokopion University of Athens, Greece, ^bSchool of Chemical Engineering, National Technical University of Athens, Greece

12:00 Measurement of the effective diffusion coefficient of water in spray dried amorphous lactose particles (EPF665) Pp815

A.H.J. Paterson, G. Ripberger

School of Engineering and Advanced Technology, Massey University, New Zealand

12:15 Development of tribology equipment to characterise food structures (EPF693) Pp817

T. Mills, S. Bakalis, I. Norton

Chemical Engineering, University of Birmingham, UK

12:30 Effect of convective drying on quality of lemon balm (*Melissa officinalis* L.) (EPF440) Pp819

D. Argyropoulos, J. Müller

Institute of Agricultural Engineering, Universität Hohenheim, Germany

12:45 Estimation of manufacturing cost of clove (*Eugenia caryophyllus*) extracts obtained by supercritical fluid extraction using a commercial simulator (FPD807) Pp821

J.M. Prado, M.A.A. Meireles

LASEFI/DEA/FEA (School of Food Eng.), UNICAMP (University of Campinas), Brazil

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	Conclusions
13:00-13:30	Closing remarks
	End of Congress

POSTER SESSIONS

MONDAY, MAY 23rd - POSTER SESSION 1

8:30-13:00

Food polymers

P-FMS 2

Selection of cassava starch-carnauba wax composite edible coating used to preserve fresh-cut apples (FMS150) Pp853

M. Chiumarelli, M. Dupas Hubinger

Department of Food Engineering, School of Food Engineering, University of Campinas, Brazil

Magnetic Resonance Imaging and NMR relaxometry to understand binding of divalent ions from whey protein hydrogels (FMS154) Pp855

M. Oztop^{a,b}, M. Rosenberg^c, K. McCarthy^{a,c}, M.J. McCarthy^{a,c}

^aDepartment of Biological and Agricultural Engineering, University of California, Davis, USA, ^bDepartment of Food Engineering, Middle East Technical University, Turkey, ^cDepartment of Food Science & Technology, University of California, USA

Physicochemical properties of chitosan-essential oils film-forming dispersions. Effect of homogenization treatments (FMS170) Pp857

J. Bonilla, M. Vargas, L. Atarés, A. Chiralt

Institute of Food Engineering for Development (IUIAD), Universidad Politécnica de Valencia, Spain

Physical properties of chitosan-basil essential oil edible films as affected by oil content and homogenization conditions (FMS171) Pp859

J. Bonilla, M. Vargas, L. Atarés, A. Chiralt

Institute of Food Engineering for Development (IUIAD), Universidad Politécnica de Valencia, Spain

Mechanical properties of gelatin nanocomposite films prepared by spreading: Effect of montmorillonite concentration (FMS188) Pp861

M.F. Coronado Jorge, F.M. Vanin, R. Aparecida de Carvalho, I.C. Freitas Moraes, A.M. Quinta Barbosa Bittante, S. Fernandes Nassar, P. José do Amaral Sobral

Food Engineering Department, FZEA, University of São Paulo, Brazil

The effect of K⁺, Ca²⁺ and their mixtures on the retention of ethyl butyrate by low acyl gellan gels (FMS304) Pp863

V. Evageliou, I. Mavragani, P. Galanaki, M. Komaitis

Department of Food Science and Technology, Agricultural University of Athens, Greece

Food polymers as gelatine replacers in confectionary industry (FMS308) Pp865

D. Komes, D. Horžić, A. Belščak-Cvitanović

Faculty of Food Technology and Biotechnology, University of Zagreb, Croatia

Application of different methods for carbohydrates determination in raw materials and confectionery products enriched with dietary fibres (FMS309) Pp867

D. Komes, A. Belščak-Cvitanović, D. Horžić, L. Babahmetović

Faculty of Food Technology and Biotechnology, University of Zagreb, Croatia

Composition, physicochemical and morphological characterization of pumpkin flour (FMS328) Pp869

M. Saeleaw^{a,b}, G. Schleining^b

^aFaculty of Home Economics Technology, Rajamangala University of Technology Krungthep, Thailand, ^bDepartment of Food Sciences and Technology, BOKU University of Natural Resources and Life Sciences, Austria

Effect of saturated and unsaturated fatty acids on structural and optical properties of corn starch-glycerol based films (FMS445) Pp871

A. Jiménez^a, P. Talens^b, A. Chiralt^a

^aInstituto Universitario de Ingeniería de Alimentos para el Desarrollo, Universitat Politècnica de València, Spain, ^bDepartamento de Tecnología de Alimentos, Universitat Politècnica de València, Spain

Thermal analysis and rheological properties of portuguese nut starches isolated by alkali and enzymatic methods (FMS561) Pp873

P. Correia^a, M. Cristiana-Nunes^{b,c}, L. Beirão-da-Costa^c

^aCI&DETS, Escola Superior Agrária, Instituto Politécnico de Viseu, Portugal, ^bNúcleo de Investigação em Engenharia Alimentar e Biotecnologia, Instituto Piaget-ISEIT de Almada, Portugal, ^cCEER - Biosystems Engineering, Institute of Agronomy, Technical University of Lisbon, Portugal

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MONDAY, MAY 23rd - POSTER SESSION 1

8:30-13:00

Segregative phase separation of a native globular pea proteins -sodium alginate- water ternary system: Microstructure analysis by confocal microscopy (CLSM) (FMS701) Pp875

J.-L. Messian, A. Assifaoui, R. Saurel, P. Cayot

Emma Laboratory, Burgundy University, France

The influence of sugars on pressure induced starch gelatinization (FMS738) Pp877

K. Reineke, H. Weich, D. Knorr

Technische Universität Berlin, Department of Food Biotechnology and Food Process Engineering, Germany

Impact of emulsifier-polysaccharide interactions on the stability and rheology of stabilised oil-in-water emulsions (FMS749) Pp879

K.G. Zinoviadou^a, T. Moschakis^a, V. Kiosseoglou^b, C.G. Biliaderis^a

^aDepartment of Food Science and Technology, School of Agriculture Aristotle University of Thessaloniki, Greece, ^bDepartment of Chemistry, Aristotle University of Greece

Rheological properties of maltodextrin based fat-reduced confectionery spread systems (FMS766) Pp881

M. Hadnađev^a, T. D. Hadnađev^a, A. Torbica^a, L. Dokić^b, V. Krstonošić^c

^aInstitute for Food Technology, Novi sad, Serbia, ^bFaculty of Technology, Novi sad, Serbia, ^cFaculty of medicine, Novi sad, Serbia

Functional properties and antimicrobial activity of gelatin-based films containing propolis (FMS776) Pp883

R.B. Bodini, C.S. Favaro-Trindade, P.J.A. Sobral, R.A. Carvalho

Food Engineering Department, FZEA - University of São Paulo, Brazil

Impact of sodium chloride and different sodium replacers on the retrogradation kinetics of baked goods (FMS834) Pp885

M. Beck, M. Jekle, T. Becker

Technische Universität München, Institute of Brewing and Beverage Technology, Germany

Mucoadhesive polymers for food formulations (FMS911) Pp887

M.F. Ali, S. Bakalis

School of Chemical Engineering, School of Engineering, University of Birmingham, UK

The phase behaviour of carbohydrate polymer mixtures (FMS1164) Pp889

F. De Vito^a, J.L. Kokini^b, B. Veytsman^c, P. Painter^d

^aUniversity of Illinois, USA, ^bUniversity of Illinois, USA, ^cGeorge Mason University, USA, ^dPenn State University, University Park, USA

Impact of high pressure treatment on the available glucose content of various starch types (FMS1211) Pp891

M. Papathanassiou^a, P. Taoukis^a, K. Reineke^b, D. Knorr^b

^aSchool of Chemical Engineering, NTUA, Greece, ^bTechnische Universität Berlin, Germany

Extraction, purification and characterization of a new water-soluble polysaccharide from *Acanthophyllum bracteatum* roots (FMS1237) Pp893

K. Jahanbin^a, S. Moini^b, A. R. Gohari^b, Z. Emam-Djomeh^a

^aDepartment of Food Science and Engineering, Faculty of Biosystem Engineering, Campus of Agriculture and Natural Resources, University of Tehran, Iran, ^bFaculty of Pharmacy, Medicinal Plants Research Center, Medical Sciences/University of Tehran, Iran

Food structure and modeling

P-FMS 3

Time-resolved reflectance spectroscopy nondestructively reveals structural changes in 'Pink Lady®' apples during storage (FMS105) Pp895

M. Vanoli^{a,b}, A. Rizzolo^a, M. Grassi^a, A. Farina^b, A. Pifferi^b, L. Spinelli^c, A. Torricelli^b

^aConsiglio per la Ricerca e Sperimentazione in Agricoltura – Unità di ricerca per i processi dell'industria agroalimentare (CRA-IAA), Italy,

^bPolitecnico di Milano, Dipartimento di Fisica, Italy, ^cIstituto di Fotonica e Nanotecnologie – CNR Italy

Mathematical modelling of mixing of salt and meat by pilot bowl-cutter (FMS115) Pp897

I.V. Vodyanova^a, I. Storrø^b, A. Olsen^b, T. Rustad^a

^aDepartment of Biotechnology, NTNU, Norway, ^bSINTEF, Fisheries and Aquaculture, Norway

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MONDAY, MAY 23rd - POSTER SESSION 1

8:30-13:00

Modelling oil migration in two-layer confectionary products (FMS164) Pp899

T. R. Rumsey^a, K. L. McCarthy^b

^aDepartment of Biological and Agricultural Engineering, University of California, USA, ^bDepartment of Food Science and Technology, University of California, Davis, USA

Oil migration in chocolate and almond butter confectionery systems (FMS165) Pp901

A. Altan^a, D.M. Lavenson^b, M.J. McCarthy^b, K.L. McCarthy^b

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Investigation of quality and stability of canola oil refined by adding chemical agents and membrane processing (FMS319) Pp903

R. Niazmand^a, R. Farhoosh^b, S.M.A. Razavi^b, M. Shahidi Noghabi^b

^aIslamic Azad University, Damghan Branch, Iran, ^bDepartment of Food Science and technology Ferdowsi University of Mashhad, Iran

Evaluation of surface free energy of various fruit epicarps using acid-base and Zisman approaches (FMS539) Pp905

O. Skurtys^a, P. Velasquez^b, F. Pedreschi^b, F. Osorio^a

^aUniversity of Santiago of Chile, Chile, ^bPontifical Catholic University of Chile, Chile

Effects of cell size and tissue electrical conductivity on damage of plant tissue by pulsed electric field (FMS648) Pp909

J.B. Ammar^a, J.-L. Lanoisel^a, N. Lebovka^b, E. Van Hecke^a, E. Vorobiev^a,

^aUnité Transformations Intégrées De La Matière Renouvelable, University Of Technology Of Compiègne, ^bInstitute of Biocolloidal Chemistry named after F.D. Ovcharenko

Use of near infrared spectral imaging for early detection of physical damage in mushrooms (*Agaricus bisporus*) (FMS1110) Pp911

C. Esquerre^a, A. Gowen^a, G. Downey^{a,b}, C. O'Donnell^a

^aBiosystems Engineering, School of Agriculture Food Science and Veterinary Medicine, University College Dublin, Ireland, ^bTeagasc Food Research Centre, Ireland

The effect of electrical processing on mass transfer and mechanical properties of food materials (FMS1115) Pp913

G. Porras-Parral, T. Miri, S. Bakalis, P. Fryer

School of Chemical Engineering, University of Birmingham, UK

Restructured beef by application of microbial transglutaminase and sodium caseinate (FMS1131) Pp915

A. Llorente, F. Garcia, J. Lopez, R. Melendez, Z. Guadarrama, J. Rico

Ingeniería Y Tecnología, FESC-UNAM, Mexico

Complexation of olive oil antioxidant with cyclodextrins (FMS1159) Pp917

F. Moraes^a, C. Barao^a, G. Zanin^a, F. Paiva-Martins^b

^aUniversidade Estadual de Maringá, Brazil, ^bUniversidade do Porto, Portugal

Electrical resistance tomography for monitoring emulsions and foams (FMS1239) Pp919

T.D. Karapantsios, M. Kostoglou

School of Chemistry, Department of Chemical Technology and Industrial Chemistry, Aristotle University of Thessaloniki, Greece

Water and water related phenomena in foods

P-FMS 6

Effect of operating parameters on performance of nanofiltration of sugar beet press water (FMS282) Pp951

M. Shahidi Noghabi^a, S.M.A. Razavi^b, S.M. Mousavi^c, R. Niazmand^b

^aKhorasan Research Institute for Food Science and Technology (KRIFST), Iran, ^bDepartment of Food Science and Technology, Ferdowsi University of Mashhad, Iran, ^cDepartment of Chemical Engineering, Ferdowsi University of Mashhad, Iran

Study of water barrier properties of starch-based films from steady-state and transient methods (FMS357) Pp953

C. de Oliveira Romera^a, J. Oliveira de Moraes^a, V.C. Zoldan^b, A. Avelino Pasa^b, J. Borges Laurindo^a

^aDepartment of Chemical and Food Engineering, Federal University of Santa Catarina, Brazil, ^bDepartment of Physics, Federal University of Santa Catarina, Brazil

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MONDAY, MAY 23rd - POSTER SESSION 1**8:30-13:00****Equilibrium moisture contents of a medicinal herb (*Melissa officinalis*) and a medicinal mushroom (*Lentinula edodes*) determined by dynamic vapour sorption (FMS436) Pp955**D. Argyropoulos^a, R. Alex^b, J. Müller^a^aUniversität Hohenheim, Institute of Agricultural Engineering, Tropics and Subtropics Group, Germany, ^bReutlingen University, Reutlingen Research Institute, Germany**Improving water solubility of natural antibacterials to inhibit important bacteria in meat products (FMS576) Pp959**L. Dorantes^a, G. Aparicio^b, A. Ramirez^a^aBiochemical Engineering, ENCB, Instituto Politécnico Nacional, Mexico, ^bMicrobiology Department, ENCB, Instituto Politécnico Nacional, Mexico**Blanching peppers using microwaves (FMS592) Pp961**L. Dorantes-Alvarez^a, E. Jaramillo-Flores^a, K. González^a, R. Martínez^a, L. Parada^b^aEscuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, Carpio y Plan de Ayala s/n. Colonia Santo Tomas, Mexico, ^bUniversidad del Caribe, Cancun QR, Mexico**Influence of film forming solutions on properties of chitosan/glycerol films (FMS694) Pp963**J.F. Fundo^a, M.A.C. Quintas^{a,b}, C.L.M. Silva^a^aCBQF - Centro de Biotecnologia e Química Fina, Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Portugal, ^bIBB - Institute for Biotechnology and Bioengineering, Centre of Biological Engineering, Universidade do Minho, Portugal**Does surface microbial flora growth act on water transfers inside cheeses during ripening? (FMS719) Pp965**

P.-S. Mirade, J.-F. Le Page, R. Favier, S. Fatnassi, J.-D. Daudin

UR370 Qualité des produits Animaux, INRA, France

Mass transfer during osmotic dehydration of apple using sucrose, fructose and maltodextrin solution (FMS779) Pp967M.A. Khan^a, R.N. Shukla^a, S. Zaidi^b^aDept. of Post Harvest Engg. & Tech., AMU, India, ^bDept. of Chemical Engg., AMU, India**Infrared spectroscopy study of water in protein-polysaccharide gels (FMS909) Pp969**O. Safonova^a, A. Teymurova^b^aDepartment of Foodstuffs Processing Technology, Petro Vasilenko Kharkiv National Technical University of Agriculture, Ukraine,^bDepartment of Chemistry, Agronomy and Ecology, Petro Vasilenko Kharkiv National Technical University of Agriculture, Ukraine**Application of simplex lattice design for development of moisture absorber for oyster mushrooms (FMS1160) Pp971**S. Azevedo^a, L. M. Cunha^{a,b}, P. V. Mahajan^c, S. Caldas Fonseca^{b,d}^aDGAOT, Faculty of Sciences, University of Porto, Portugal, ^bREQUIMTE, University of Porto, Portugal, ^cDepartment of Process & Chemical Engineering, University College Cork, Ireland, ^dEscola Superior de Tecnologia e Gestão, IPVC, Portugal**Food rheological properties****P-EPF 3****The effect of heating on rheological behavior of vegetable edible oils (EPF120) Pp1297**M. Hojjatoleslami^a, N. Dehghannejad^a, A. Zahedi^a, M. Gharachorloo^b^aIslamic Azad University, ShahreKord branch, Food science and technology department, Iran, ^bIslamic Azad University, Science and research branch, Food science and technology department, Iran**Viscoelastic properties of tomato juice (EPF239) Pp1299**P.E.D. Augusto^a, V. Falguera^b, M. Cristianini^a, A. Ibarz^b^aDepartment of Food Technology, University of Campinas, Brazil, ^bDepartment of Food Technology, University of Lleida, Spain**Effect of starter culture on the structure development and acidification process of set yogurt (EPF341) Pp1301**G. Vlahavas^a, K. Antoniou^a, E. Psomas^a, P. Demertzis^b^aDepartment of Food Technology, ATEI of Thessaloniki, Greece, ^bDepartment of Chemistry, University of Ioannina, Greece**Quantification of grittiness of yogurt using flow characteristics indexes (EPF442) Pp1303**Y. Hagura^a, H. Takahashi^a, K. Kawai^a, S. Oikawa^b, T. Mawatari^b^aDepartment of Biofunctional Science, Hiroshima University, Japan, ^bGlico Dairy Products Co Ltd., Institute for Technical Research, Japan***Pp: Page number in Printed Proceedings**

MONDAY, MAY 23rd - POSTER SESSION 1

8:30-13:00

Physicochemical properties of parsnip (*Pastinaca sativa*) and yacon (*Smallanthus sonchifolius*) fibre suspensions on homogenization (EPF444) Pp1305

A. Castro^{a,b}, S. Carballo^b, B. Bergenståhl^a, E. Tornberg^a

^aDepartment of Food Technology, Lund University, Sweden, ^bCentro de Alimentos y Productos Naturales, Universidad Mayor de San Simón, Bolivia

Effect of starter culture, milk fat and storage time on the rheological behaviour of kefir (EPF446) Pp1307

K.D. Antoniou, S. Topalidou, G. Tsavali, G. Dimitreli

Department of Food Technology, ATEI of Thessaloniki, Greece

Rheological properties of flaxseed gum solutions with NaCl or CaCl₂ addition (EPF460) Pp1309

K. Regina Kuhn^a, Â.L. Fazani Cavallieri^{a,b}, R. Lopes da Cunha^a

^aDepartment of Food Engineering, University of Campinas, Brazil, ^bDepartment of Food Science, Federal University of Goiás, Brazil

Relationship between rheological characteristics and structure of blanched and/or osmotically dehydrated apple in presence of calcium (EPF596) Pp1311

A.B. Loredo Garcia^a, S. Guerrero^{a,b}, S.M. Alzamora^{a,b}

^aDepartamento de Industrias, Universidad de Buenos Aires, Argentina, ^bConsejo Nacional de Investigaciones Científicas y Técnicas de la República, Argentina

Influence of interactions type between hydrocolloids on rheological characteristic times (EPF737) Pp1313

A. Ptaszek, P. Ptaszek

Department of Engineering and Machinery for Food Industry, University of Agriculture in Krakow, Poland

Structural and rheological characteristics of cross-linked banana starch with different cross-linking agents (EPF810) Pp1315

M.L. Rodríguez-Marín, M.C. Núñez-Santiago, L.A. Bello-Pérez

Centro de Desarrollo de Productos Bióticos del IPN, México

Evaluation of the consistency of low-fat mayonnaise by squeezing flow viscometry (EPF875) Pp1317

A.S. Thomareis, S. Chatziantoniou

Department of Food Technology, Alexander Technological Educational Institute of Thessaloniki, Greece

A simple and accurate method for the estimation of yield stress by rotational viscometry: application of the concept of infinite apparent (EPF945) Pp1319

H. Kiani, S.M.E. Mousavi, Z.E. Mousavi

Department of Food science and Technology, Faculty of Agricultural Engineering and Technology, Campus of Agriculture and Natural Resources, University of Tehran, Iran

Investigation on the relationship between rheological properties and structure of proteins to improve the viscoelasticity of zein dough through High Molecular Weight (HMW) glutenin addition (EPF994) Pp1321

M. Fevzioglu, O.H. Campanella, B.R. Hamaker

Purdue University, USA

Thermophysical and physicochemical properties of foods

P-EPF 4

Influence of concentration in the elevation of boiling point of mango pulp (*Mangifera indica* L.) EPF57 Pp1325

R.D. Andrade^{a,b}, R. Torres^b, E. Montes J^b, O.A. Pérez^b, J. Mendoza^b, R. Baquero^b

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Some physical properties and thin-layer drying parameters of foxtail millet (*Setaria italica* L.) (EPF178) Pp1327

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MONDAY, MAY 23rd - POSTER SESSION 1

8:30-13:00

Thermal and rheological properties of Brazilian honeys (EPF386) Pp1329

P.A. Costa, I.C.F. Moraes, A.M.Q.B. Bittante, P.J.A. Sobral, C.A. Gomide, C.C. Carrer
Universidade de São Paulo/FZEA, Brazil

Functional properties of foods. Database and model prediction (EPF396) Pp1331

N.A. Oikonomou, M. Krokida
Department of Chemical Engineering, National Technical University of Athens, Greece

Effects of melting temperature on rheology and crystallization properties of trans-containing and trans-free palm oil based shortening (EPF468) Pp1333

B. Fang, F. Zheng Ren
College of Food Science and Nutritional Engineering, China Agricultural University, China

Effect of ultra-high pressure homogenization and heat treatment on physicochemical properties of almond beverage (EPF699) Pp1335

N. Bernat, M. Chafer, A. Chiralt, C. Gonzalez-Martínez
Instituto de Ingeniería de Alimentos para el Desarrollo, Universidad Politécnica de Valencia, Spain

Effect of peeling on drying behaviour of two agricultural products (EPF844) Pp1337

G. Xanthopoulos^a, S. Yanniotis^b, D. Lentzou^a, S. Apostolidi^a
^a*Department of Natural Resources & Agricultural Engineering, Agricultural University of Athens, Greece,* ^b*Department of Food Science and Technology, Agricultural University of Athens, Greece*

Preparation and properties of starch acetate with different degrees of substitution (EPF901) Pp1339

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Centro de Desarrollo de Productos Bióticos del IPN, Mexico

Phytosterols in frying oils: evaluation of their absorption in pre-fried potatoes and determination of their destruction kinetics after repeated deep and pan frying (EPF978) Pp1341

P.E. Igoumenidis, M.A. Konstanta, F.N. Salta, V.T. Karathanos
Department of Science of Dietetics-Nutrition, Harokopio University, Greece

Physicochemical and melissopalynological characterization of Estonian summer honeys (EPF1051) Pp1343

E. Kirs^{a,b}, R. Pall^a, K. Martverk^a, K. Laos^{a,b}
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Predicting sensory characteristics of cakes enriched with xylanase treated cereal brans by physicochemical and thermal properties assessment (EPF1056) Pp1345

D. Lebesi, C. Tzia
School of Chemical Engineering, National Technical University of Athens, Greece

Non-Newtonian flow and heat transfer of pineapple juice in a plate heat exchanger (EPF1141) Pp1347

R.A.F. Cabral^a, J.A.W. Gut^b, V.R.N. Telis^a, J. Telis-Romero^a
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Thermal processing

P-AFT 2

Evaluation of thermal resistance and efficiency of palm olein and canola oils in frying of potato chips (AFT78) Pp1907

A. Rafe^b, S. Bolourian^a, G. Goli Movahhed^{a,b}, M. Afshari^{a,b}
^a*Department of food additives, Iranian Academic Center for Education Culture and Research (ACECR), Iran,* ^b*Department of Food Science and Technology, Ferdowsi University of Mashhad (FUM), Iran*

Assessment of furfurool derivatives: food risk factors in natural apricot and peach juice (AFT80) Pp1909

C. Jianu, I. Cocan, I. Jianu
Banat's University of Agricultural Sciences and Veterinary Medicine, Romania

Numerical evaluation of liquid food heat sterilization in a brick-shaped package (AFT238) Pp1911

P.E.D. Augusto, M. Cristianini
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MONDAY, MAY 23rd - POSTER SESSION 1

8:30-13:00

Effect of steam jet cooking on the destruction of corn starches (AFT290) Pp1913

L.H. Ferng, S.H. Chen, Y.A. Lin

Department of Food Science, National I-lan University, Taiwan

Experimental studies and interpretation of pistachio nut roasting process (AFT604) Pp1915

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Heat transfer analysis-based prediction of protein denaturation and umami component of meat during cooking (AFT623) Pp1917

N. Ishiwatari, M. Fukuoka, N. Hamada, N. Sakai

Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

Effect of steam cooking of food on mass transfer (AFT688) Pp1919

E. Descours^a, E. Ferret^{b,c}, N. Valance^d, A. Voilley^{a,c}, A.-M. Seuvre^{a,e}

^aLaboratoire EMMA, Université de Bourgogne, France, ^bLaboratoire GPMA, Université de Bourgogne, France, ^cAgrosup Dijon, France, ^dGroupe SEB, France, ^eIUT Génie Biologique, Université de Bourgogne, France

Development of experimental devices in order to study the interactions between heat and mass phenomena and thermal degradation reactions of lipids during domestic reheating of pre-fried food products (AFT781) Pp1921

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The effect of UHT and VAT thermal processing systems on whey protein denaturation and gel strength of yoghurt (AFT992) Pp1923

A. Labropoulos^a, T. Varzakas^b, S. Anestis^a

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Application of ohmic heating to whole egg (AFT1074) Pp1925

T. Nakai, M. Fukuoka, N. Sakai

Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

Transient mass and heat transfer during potato deep fat frying - The effect of the oil type, frying load and initial frying temperature (AFT1234) Pp1927

J.S. Lioumbas, M. Kostoglou, T.D. Karapantsios

Department of Chemical Technology and Industrial Chemistry, Aristotle University of Thessaloniki, Greece

Innovation in traditional processing -I-, -II-

P- AFT 3 & 5

Acceptance of iron fortified rice (I-Rice) to combat iron deficiency anemia (IDA) (AFT117) Pp1929

E.M. San Juan, N.O. Camitan, A.C. Natividad, M.U. Gochangco, L.D. Alkuino, A.R. Cariso, Jr., A.O. Lustre, A.W. Tejada

National Food Authority, Food Development Center, Philippines

Quality characteristics and drying behaviour of muffins baked in steam assisted and convectional ovens (AFT145) Pp1931

M. Sakin Yilmazer^a, H. Iseroglu^a, T. Kemerli^a, O. Ozdestan^a, G. Guven^b, F. Kaymak-Ertekin^a, A. Uren^a, B. Ozyurt^c

^aEge University, Turkey, ^bIzmir Province Control Laboratory, Ministry of Agricultural and Rural Affairs, Turkey, ^cMaterial Technology Department, Arçelik A.S. Çayirova Campus, Turkey

Study of an innovative combination between microwaves and enzymes applied to bakery products (AFT173) Pp1933

T. De Pilli, A. Derossi, R. Giuliani, C. Severini

Department of Food Science, University of Foggia, Italy

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MONDAY, MAY 23rd - POSTER SESSION 1**8:30-13:00****Effective removal of heavy metal in some fish sauce products by tannin treatment (AFT228) Pp1935**T. Sasaki^a, T. Michihata^a, S. Nakamura^a, T. Enomoto^b, T. Koyanagi^b, H. Taniguchi^b, M. Aburatani^c, M. Koudou^{a,b}, K. Tokuda^c^aIndustrial Research Institute of Ishikawa, Japan, ^bIshikawa Prefectural University, Japan, ^cShata Shuzo Co., Ltd., Japan**Crispy air-dried pineapple rings: optimization of processing parameters (AFT450) Pp1937**

G. Cortellino, P. Pani, D. Torreggiani

*Research Unit of Food Technology, Council of Agricultural Research, Italy***Extraction of polyphenols from grape seeds by unconventional methods and extract concentration through polymeric membrane (AFT471) Pp1939**D. Liu^a, E. Vorobiev^a, R. Savoie^b, J.-L. Lanoisellé^{a,c}^aCentre de Recherche de Royallieu, Université de Technologie de Compiègne, France, ^bEcole supérieure de chimie organique et minérale, Compiègne, France, ^cUniversité de Bretagne Sud, France**Performance of bovine and ovine liquid whey protein concentrate on functional properties of set yoghurts (AFT518) Pp1941**M. Henriques^{a,b}, D. Gomes^a, D. Rodrigues^a, C. Pereira^a, M. Gil^b^aDep. of Food Science and Technology, Polytechnic Institute of Coimbra, Portugal, ^bChemical Engineering Dep., Uni. of Coimbra, Portugal**Manufacture of gelatin-based films using extrusion: Assessment of extrusion parameters on film properties (AFT578) Pp1943**

Z.A. Nur Hanani, E. Beatty, Y.H. Roos, J.P. Kerry

*School of Food and Nutritional Sciences, University College Cork (UCC), Ireland***Combining microwave and jet-impingement in a oven prototype (AFT670) Pp1945**G. Ruocco^a, M.V. De Bonis^a, F. Marra^b^aCollege of Food Technology, University of Basilicata, Italy, ^bDepartment of Industrial Engineering, University of Salerno, Italy**The sequential ventilation of cheese ripening rooms: An eco-design approach? (AFT790) Pp1947**P.-S. Mirade^a, B. Perret^b, H. Guillemin^b, D. Picque^b, C. Callon^c, M.-C. Montel^c, G. Corrieu^b^aUR370 Qualité des Produits Animaux, INRA, France, ^bUMR782 Génie et Microbiologie des Procédés Alimentaires, INRA, France, ^cUR545 Recherches Fromagères, INRA, France**Influence of additives on white tin loaf alveolli formation (AFT856) Pp1949**C. Domingues^a, P. Prazeres^b, P. Correia^{a,c}^aEscola Superior Agrária, Instituto Politécnico de Viseu, Viseu, Portugal, ^bBimbo, Produtos Alimentares, Albergaria-a-Velha, Portugal, ^cCI&DETS, Instituto Politécnico de Viseu, Portugal**Textural properties of vegetables: A key parameter on ultrasonic assisted convective drying (AFT857) Pp1951**

C. Ozuna, J.A. Cárcel, J.V. Santacatalina, A. Mulet, J.V. García-Pérez

*Departamento de Tecnología de Alimentos, Universidad Politécnica de Valencia, Spain***The influence of palm oil quality on the refining conditions (AFT858) Pp1953**K.A. Sampaio^a, J.V. Ayalla^b, S.M. Silva^a, R. Ceriani^c, R. Verhé^d, A.J.A. Meirelles^a^aEXTRA-E, Food Engineering Faculty, University of Campinas, Brazil, ^bDesmet & Ballestra R&D Center, Belgium, ^cSchool of Chemical Engineering, University of Campinas, Brazil, ^dFaculty of Bioscience Engineering, Ghent University, Belgium**Challenges and solutions of a novel muscle-food processing technology: acid and alkaline solubilization (AFT962) Pp1955**P.K. Vareltzis^a, K.G. Adamopoulos^a, H.O. Hultin[†]^aDepartment of Chemical Engineering, Aristotle University of Thessaloniki, Greece, [†]Department of Food Science, University of Massachusetts at Amherst, USA**Effect of various proteins on characteristics and syneresis of tzatziki (AFT964) Pp1957**A.G. Stefanakis^a, E.K. Stavrakakis^a, K.G. Adamopoulos^a, P.K. Vareltzis^a, A.M. Goula^a^aDepartment of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece, ^bDepartment of Food Science and Technology, Aristotle University of Thessaloniki, Thessaloniki, Greece***Pp: Page number in Printed Proceedings**

MONDAY, MAY 23rd - POSTER SESSION 1**8:30-13:00****High-power ultrasound-assisted pasteurisation of honey (AFT974) Pp1959**D. Kabani^{a,b}, F. Sepulcre^b, E. Gaston^a, J. Wedekind^a^aInnovació i Recerca Industrial i Sostenible Co, Spain, ^bDepartament d'Enginyeria Agroalimentària i Biotecnologia, Universitat Politècnica de Catalunya, Spain**Fourier transform infrared (FTIR) spectroscopic analysis of biodegradable gelatin films immersed in water (AFT988) Pp1961**

Z.A. Nur Hanani, Y.H. Roos, J.P. Kerry

Food Packaging Group, School of Food & Nutritional Sciences, University College Cork (UCC), Ireland

Effects of edible chitosan-linseed mucilage coating on quality and shelf life of fresh-cut strawberry (AFT1032) Pp1963L.E. Pérez Cabrera^a, G.C. Díaz Narváez^a, A. Tecante Coronel^b, C. González Martínez^c^aDepartment of Food Technology, Universidad Autónoma de Aguascalientes, Aguascalientes, México, ^bDepartment of Food and Biotechnology, Universidad Nacional Autónoma de México, Ciudad de México, ^cDepartment of Food Technology, Universidad Politécnica de Valencia, Spain**How to apply acrylamide mitigation tools in food technology (AFT1079) Pp1965**

Z. Ciesarová, K. Kukurova, L. Markova, J. Sadecka

VUP Food Research Institute Bratislava, Slovak Republic

Coconut water processing using ultrafiltration and pasteurization (AFT1113) Pp1967L.A. Nakano^a, W.F. Leal Jr.^b, D.G.C. Freitas^b, L.M.C. Cabral^b, E.M. Penha^b, A.L. Penteado^b, V.M. Matta^b^aFederal Rural University of Rio de Janeiro, Brazil, ^bEmbrapa Food Technology, Brazil**Separation and purification processes****P-NFP 3****Fractionation of liquid egg yolk: Influence of chemical and structural characteristics of egg yolk granular and plasma fraction on the continuous centrifugal separation process (NFP25) Pp1687**

T. Strixner, M. Betz, U. Kulozik

ZIEL Food and Nutrition Research Center, Technische Universität München, Germany

Refining of crude canola oil using PSA ultrafiltration membrane (NFP77) Pp1689A. Rafe^a, S.M.A. Razavi^b, M.H. Haddad Khodaparast^{a,b}^aDepartment of Food Science and Technology, Ferdowsi University of Mashhad (FUM), Iran, ^bDepartment of Food Science and Technology, Ferdowsi University of Mashhad (FUM), Iran**Optimization of proteins recovery process from cheese whey (NFP190) Pp1691**A. Cuellas^a, R. Jagus^b, J.R. Wagner^{a,c}^aDepartamento de Ciencia y Tecnología, Universidad Nacional de Quilmes, Argentina, ^bFacultad de Ingeniería, U.B.A., Argentina, ^cConsejo Nacional de Investigaciones Científicas y Técnicas**Production of adsorbents based on food waste (corn cobs) for removal of phenylalanine and tyrosine from aqueous solutions (NFP530) Pp1693**A.S. Franca^{a,b}, C.C.O. Alves^b, L.S. Oliveira^{a,b}^aDepartamento de Engenharia Mecânica, Universidade Federal de Minas Gerais (UFMG), Brazil, ^bPrograma de Pós-Graduação em Ciência de Alimentos, UFMG, Brazil**The effect of applied conditions on whey separation and fractionation using ultra- and nanofiltration (NFP638) Pp1695**

P. Zidova, A. Hinkova, V. Pour, Z. Bubnik, S. Henke, A. Salova, P. Kadlec

Institute of Chemical Technology Prague, Department of Carbohydrate Chemistry and Technology, Czech Republic

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MONDAY, MAY 23rd - POSTER SESSION 1**8:30-13:00****Separation and fractionation of *Aquilaria malaccensis* oil using supercritical fluid extraction and the cytotoxic properties of the extracted oil (NFP690) Pp1697**

A.H. Ibrahim^a, S.S. Al-Rawi^b, A.M.S. Abdul Majid^a, N.N. Ab. Rahman^c, K.M. Abo-Salah^d, M.O. Ab Kadir^b
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Sugaring out for separation of acetonitrile and extraction of proteins and antibiotics (NFP734) Pp1699

P.B. Dhamole^{a,b}, P. Mahajan^a, H. Feng^{a,c}
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Gamma-oryzanol solubility and effect of solvents mixture (NFP774) Pp1701

M.S. Cuevas^a, R.E. Shinzato^a, M.C. Costa^a, C.E.C. Rodrigues^b, A.J.A. Meirelles^a
^aUniversity of Campinas, Brazil, ^bUniversity of São Paulo, Brazil

Extraction of ascorbic acid using alcohol/phosphate potassium salt-based aqueous two-phase system (NFP886) Pp1703

I.A.O. Reis^a, S.B. dos Santos^a, L.A.S. Nascimento^a, N. Oliveira^a, S.P.M. Ventura^b, J.A.P. Coutinho^b, C.M.F. Soares^{a,c}, Á. Silva Lima^{a,c}
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Partition of amyloglucosidase in poly(ethyleneglycol)/sodium-poly(acrylate) aqueous two-phase systems (NFP903) Pp1705

L.A.P. Alcântara, L.A. Minim, C.A. Mourão, V.P.R. Minim
Federal University of Viçosa, Brazil

Isolation of mannose using simulated moving bed chromatography (NFP920) Pp1707

S. Henke, Z. Bubník, A. Hinková, V. Pour, A. Šalová, P. Židová
Institute of Chemical Technology, Department of Carbohydrate Chemistry and Technology, Czech Republic

Brewer's spent grain standardization and upstream processes for enzymatic hydrolysate production (NFP1020) Pp1709

C.E. Kotlar^{a,b}, M. Belagard^{a,c}, M.V. Agüero^{a,b}, S.I. Roura^{a,b}
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Treatment of passion fruit juice by membrane process technology (NFP1049) Pp1711

R. Domingues^a, G. Madrona^b, V.L. Cardoso^a, M.H.M. Reis^a
^aFederal University Of Uberlandia, Chemical Engineering Faculty, Brazil, ^bState University of Maringa, Food Engineering School, Brazil

Honey & honey adulteration detection: A review (NFP1066) Pp1713

L. Mehryar, M. Esmaili
Department of Food Science and Technology, University of Urmia, Iran

Scaling-up effects on supercritical CO₂ extraction kinetics of pelletized tomato (NFP1077) Pp1715

G.A. Núñez^a, L.I. Mödinger^a, J.M. del Valle^a, R. Eggers^b
^aDepartment of Chemical and Bioprocesses Engineering, Pontificia Universidad Católica de Chile, Chile, ^bInst. Thermal Separation Processes, Technische Universität Hamburg-Harburg, Germany

Supercritical extraction of astaxanthin from *H. pluvialis* using ethanol - modified CO₂. Experiments and modelling (NFP1084) Pp1717

A. Bustamante^a, P. Roberts^a, R. Aravena^b, J.M. del Valle^b
^aDepartamento de Ciencia y Tecnología Química de los Alimentos, Facultad Ciencias Químicas y Farmacéuticas, Universidad de Chile, Chile, ^bDepartamento de Ingeniería Química y Bioprosos, Pontificia Universidad Católica de Chile, Chile

Supercritical carbon dioxide extraction and fractionation of rapeseed cake oil (NFP1127) Pp1719

E. Uquiche^a, K. Salazar^a, X. Fica^a, J.M. del Valle^b
^aUniversidad de La Frontera (UFRO), Chile, ^bPontificia Universidad Católica de Chile, Chile

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Image analysis to estimate the weight of fish (MCF44) Pp1453M.O. Balaban^a, G.F. Ünal Şengör^b, B. Gümüş^c, D. Cırbacı^d^aUniversity Of Alaska, USA, ^bIstanbul University, Faculty of Fisheries, Turkey, ^cAkdeniz University, Faculty of Fisheries, Turkey, ^dIzmir High Technology Institute, Turkey**Machine vision evaluation of some pollock roe quality attributes (MCF46) Pp1455**M.O. Balaban^a, B. Gümüş^b, D. Cırbacı^c, M. Chombeau^d^aUniversity Of Alaska, USA, ^bAkdeniz University, Faculty of Fisheries, Turkey, ^cIzmir High Technology Institute, Turkey, ^dAgricultural Eng. School, ESITPA, France**Pretreatment of liquors using solid phase extraction to measure their ethanol content by refractive index (MCF98) Pp1459**B. Gil^a, T.-E. Kim^b, N. Kim^b, C.-T. Kim^b, J.-S. Maeng^b, Y.-J. Cho^b^aAnyang University, Anyang, Korea, ^bKorea Food Research Institute, Songnam, Korea**Eliminating the interference of ascorbic acid on the measurement of uric acid using cyclic voltammogram of oxygen plasma treated screen-printed carbon electrodes (MCF111) Pp1461**H.-D. Jang^a, C.-L. Hsu^b, Y.-H. Chang^a, K.-S. Chang^a^aDepartment of Food Science, Yuanpei University, Taiwan, ^bDepartment of Food Science, Tunghai University, Taiwan**On the use of combined heat flux measurements and image analysis procedures for the change of scales between industrial and pilot ovens (MCF366) Pp1463**A. Sommier^a, Y. Anguy^a, E. Dumoulin^b, J. Rojas^c, M. Vignolle^c^aTREFLE, UMR8508, France, ^bAgroparistech, France, ^cMarie groupe LDC, France**Limit of discrimination and time to detection of a RGB imaging system to differentiate and monitor the loss of quality due to mechanical bruising in mushrooms (MCF394) Pp1465**E. Gaston^{a,b}, P.J. Cullen^a, J.M. Frías^a^aSchool of Food Science and Environmental Health, Dublin Institute of Technology, Ireland, ^bAgrofood group, Innovació i Recerca Industrial i Sostenible, Spain**Light scatter estimation of clotting and cutting time in sheep cheese manufacture (MCF490) Pp1467**N. Nicolau^a, M. Castillo^a, M. Buffa^a, D.J. O'Callahan^b, B. Guamis^a^aDepartament de Ciència Animal i dels Aliments, Universitat Autònoma de Barcelona, Spain, ^bTeagasc, Moorepark Food Research centre, Ireland**Evaluating cooking losses of meat emulsions by light scatter (MCF510) Pp1469**G. Nieto^{a,c}, M. Castillo^{b,c}, F. Payne^c, Y. Xiong^d^aDepartment of Food Technology, University of Murcia, Spain, ^bDepartment of Animal and Food Sciences, Universitat Autònoma de Barcelona, Spain, ^cDepartment of Biosystems and Agricultural Engineering, University of Kentucky, USA, ^dDepartment of Animal and Food Sciences, University of Kentucky, USA**Monitoring pasta production line using automated imaging technique (MCF735) Pp1473**

A. Mokhtar, M.A. Hussein, T. Becker

Group of (Bio-) Process Technology and Process Analysis, Technische Universität München, Germany

Fish sex sorting automation (MCF768) Pp1475

R. Rodríguez, S. Moya, I. Martínez de Marañón

AZTI-Tecnalia, Spain

A portable NIR device for the optical supervision of milk coagulation process (MCF874) Pp1477E.C. Correa^{a,b}, B. Moreno-Lucas^b, M.C. Chamorro^b, P. Barreiro^a^aPhysical Properties Laboratory and Advanced Technologies in Agrofood, Technical University of Madrid, Spain, ^bSchool of Agricultural Technical Engineering, Technical University of Madrid, Spain**Multivariate process control by transitions scheme in a soft-drinks bottling process using 3-Way PLS approach (MCF1022) Pp1479**J. Saavedra^{a,b}, A. Córdova^a^aResearch Group on Chemometrics, Department of Food Engineering, Pontificia Universidad Católica de Valparaíso, Chile, ^bCentro Regional de Estudios en Alimentos Saludables (CREAS), Chile***Pp:** Page number in Printed Proceedings

MONDAY, MAY 23rd - POSTER SESSION 2

14:30-19:00

Development of an impedance measurement system for the detection of the decay of apples (MCF1261) Pp1481

F. Euring^a, W. Russ^b, W. Wilke^c, U. Grupa^a

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Development of a low-cost non-destructive system for measuring moisture and salt content in smoked fish products (MCF1285) Pp1483

P. Karásková^a, A. Fuentes^b, I. Fernández-Segovia^b, M. Alcañiz^b, R. Masot^b, J.M Barat^b

^aInstitute of Chemical Technology of Prague, Czech Republic, ^bUniversidad Politécnica de Valencia, Spain

Mechanical properties of foods

P-EPF 1

Influence of different substitution levels of Balangu seed gum on textural characteristics of selected hydrocolloids (EPF108) Pp1247

S.M.A. Razavi, T. Mohammadi Moghaddam

Department of Food Science and Technology, Ferdowsi University of Mashhad, Iran

Multiple emulsions as a tracer system for controlling shear stress applied during viscous food product manufacturing (EPF281) Pp1249

F. Fayolle^a, S. Khayat^{a,b}, J.-L. Grossiord^b, G. Mekhloufi^b

^aLUNAM Université, France, ^bLaboratoire de Physique Pharmaceutique, UMR CNRS France

Effect of maltose and maltose syrup on rheological characteristics at high and small deformations, water mobility and structure of osmotically dehydrated apple tissue (EPF603) Pp1251

S. Vicente^a, A. Nieto^{a,d}, K. Hodara^b, M. Agueda Castro^c, S.M. Alzamora^{a,d}

^aDepartment of Industry, and ^cDepartment of Biology, Natural and Exact Sciences School, University of Buenos Aires, Argentina, ^bAgronomy School, University of Buenos Aires, Argentina, ^dCONICET

Creeping analysis of starch pastes with addition of xanthan gum (EPF872) Pp1253

P. Ptaszek, A. Ptaszek, M. Grzesik, M. Halik, S. Gryz

Food Technology, Agriculture University in Krakow, Poland

The mechanical properties of low saccharose meringues (EPF873) Pp1255

S. Gryz^a, A. Ptaszek^a, W. Berski^b, K. Gryz

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^bDepartment of Carbohydrates Technology, University of Agriculture in Krakow, Poland

Food properties

P-EPF 2

Evaluation of sensory characteristics and texture of an economic Buffalo meat (*Bubalus bubalis*) sausage and an economic beef (*Bos indicus*) sausage with addition of bovine hemoglobin powder (EPF51) Pp1257

J.F. Rey, C.L. Martínez, A. Urrea

Universidad de la Salle, Colombia

Odorant properties of beef: Chemometric and bioinformatics modeling (EPF60) Pp1259

C.A. Acevedo

Biotechnology Center, Universidad Técnica Federico Santa María, Chile

Effect of die material on engineering properties of dried pasta (EPF144) Pp1261

S. Mercier, L.-P. Des Marchais, S. Villeneuve, M. Foisy

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Biochemical and fungal characterization of dried pears and other fruits (EPF152) Pp1263

I. Almeida^a, R. Guiné^{a,b}, E. Costa^{a,b}

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MONDAY, MAY 23rd - POSTER SESSION 2**14:30-19:00****Influence of drying treatment on the physical and chemical properties of cucumber (EPF153) Pp1265**F. Henriques^a, R. Guiné^b, M. João Barroca^c^a*Polytechnic Institute of Viseu, ESAV, Portugal*, ^b*CI&DETS, Polytechnic Institute of Viseu, ESAV, Portugal*, ^c*CERNAS-ESAC/ISEC, Polytechnic Institute of Coimbra, Portugal***Microencapsulation of flaxseed oil by spray drying: influence of process conditions and emulsion properties (EPF155) Pp1267**R.V. Tonon^{a,c}, C.R.F. Grosso^b, M.D. Hubinger^a^a*Department of Food Engineering, University of Campinas, Brazil*, ^b*Department of Food and Nutrition, University of Campinas, Brazil*, ^c*Embrapa Food Technology, Brazil***Influence of emulsion properties on the microencapsulation of orange essential oil by spray drying (EPF156) Pp1269**P.A.O. Carmona^a, R.V. Tonon^{a,b}, M.D. Hubinger^a^a*Department of Food Engineering, University of Campinas, Brazil*, ^b*Embrapa Food Technology, Brazil***Chemical composition and stability of rapeseed oil produced from various cultivars grown in Lithuania (EPF278) Pp1271**

D. Gruzdienė, E. Anelaukaitė

*Department of Food Science and Technology, Kaunas University of Technology, Lithuania***The effect of sugars on the clarity of low acyl gellan gels (EPF303) Pp1273**

V. Evageliou, A. Zikas, A. Basios, A. Gerolemou, M. Komaitis

*Department of Food Science and Technology, Agricultural University of Athens, Greece***A Composite model for wheat flour dough under large deformation (EPF351) Pp1275**

M.A.P. Mohammed, E. Tarleton, M.N. Charalambides, J.G. Williams

*Mechanical Engineering Department, Imperial College London, UK***Evolution of moisture content and texture during storage of dried apricots (EPF534) Pp1277**G. Miranda^a, B. Àngel^a, R. González^b, Mulet, Antonio^c^a*Chemical Engineering Department, University of València, Spain*, ^b*Personality Department, University of València, Spain*, ^c*Department of Food Technology, University Politècnica of València, Spain***Effect of frying temperature and time on image characterization of pierogi (EPF625) Pp1279**

T.M. Moghaddam, M. Mohebbi

*Department of Food Science and Technology, Ferdowsi University of Mashhad, Iran***Evaluation of viscoelastic properties and air-bubble structure of bread containing gelatinized rice (EPF645) Pp1281**M. Shibata^a, J. Sugiyama^a, C. Ling Tsai^b, M. Tsuta^a, K. Fujita^a, M. Kokawa^b, T. Araki^b^a*National Food Research Institute, Ibaraki, Japan*, ^b*The University of Tokyo, Tokyo, Japan***Cholesterol content and atherogenicity of fermented sausages made of pork meat from various breeds (EPF675) Pp1285**S. Stajić^a, D. Živković^a, M. Perunović^a, S. Šobajić^b, D. Vranić^c^a*Department of Food Technology And Biochemistry, University Of Belgrade, Serbia*, ^b*Faculty of Pharmacy, University of Belgrade, Serbia*, ^c*Institute Of Meat Hygiene and Technology, Serbia***Characterization of *Agave angustifolia* Haw powders obtained by spray drying (EPF899) Pp1287**M.F. Fabela-Morón^{a,b}, R. Martínez-Velarde^b, G.F. Gutiérrez-López^a, A.R. Jiménez-Aparicio^b, M.L. Arenas-Ocampo^b, L. Alamilla-Beltrán^a^a*Departamento de Graduados e Investigación en Alimentos, Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, México*, ^b*Centro de Desarrollo de Productos Bióticos, Instituto Politécnico Nacional, México***Characterization of the content of reducing sugars, total sugars and starch in potato varieties and clones grown in Osorno-Chile (EPF1024) Pp1289**L. De la Fuente^a, J. Varas^a, S. Mendez^a, M. Elita López^b^a*Depto. de Ciencia y Tecnología de los Alimentos, Universidad de Los Lagos, Osorno, Chile*, ^b*Centro de Análisis de los Alimentos, Universidad de Los Lagos, Osorno, Chile****Pp: Page number in Printed Proceedings**

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Encapsulation of fennel essential oil using freeze-drying method: evaluation of process and quality characteristics of the encapsulated products (EPF1060) Pp1291

C. Chranioti, C. Tzia

School of Chemical Engineering, National Technical University of Athens, Greece

Influence of soy lecithin and PGPR levels in chocolate crystallization behavior (EPF1081) Pp1293

V.L. Zuliani Stroppa^{a,b}, A.P. Badan Ribeiro^a, V. Luccas^b, R. Grimaldi^c, L.Aparecida Guaraldo Gonçalves^c, T. Guenter Kieckbusch^a

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Microbiological and chemical properties of vacuum packaged kashar cheese produced in black sea region, Turkey (EPF1199) Pp1295

M. Dervisoglu^a, O. Gul^b

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Novel food processes

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Pulsed light decontamination of vegetables and fruits (FMS236) Pp1729

G. Pataro^a, G. Donsi^{a,b}, G. Ferrari^{a,b}

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Shelf life extension of fresh-cut fruit by UV-light exposure (NFP114) Pp1731

L. Manzocco, S. Da Pieve, I. Bartolomeoli, M. Maifreni

Dipartimento di Scienze degli Alimenti Università degli Studi di Udine, Italy

Effect of ozonation on the sensory characteristics and pasting properties of cassava starch (NFP549) Pp1733

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Department of Food Technology (DTA), School of Food Engineering (FEA), University of Campinas (UNICAMP), Brazil

Production of antioxidant enriched cranberry juice by electro dialysis with filtration membrane: impact of process on juice composition (NFP562) Pp1735

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Effect of sunflower oil applied by vacuum impregnation to refrigerated atlantic salmo (NFP841) Pp1737

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Production of *Mucor griseocyanus* protease using different carbon sources in submerged fermentation (NFP906) Pp1739

A. Ramírez^a, J. Sánchez^a, A. Iliná^a, J.C. Dusted Mendoza^b, J. Rodríguez^a, J.L. Martínez^a

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Evaluation of MAP design parameters on quality of fresh-cut produce (NFP946) Pp1741

F. Oliveira^{a,b}, M. Sousa-Gallagher^a, P. Mahajan^a, J. Teixeira^b

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Rational method for designing efficient food separation processes by chromatography "Polyphenol-ethanol/water system with polymer-resins" (NFP1002) Pp1743

M. Hosono, R. Maeda, N. Yoshimoto, S. Yamamoto

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Food-grade emulsions prepared by membrane emulsification techniques (NFP1039) Pp1745

F. Spyropoulos, R.D. Hancocks, I.T. Norton

School of Chemical Engineering, University of Birmingham, UK

Use of supercritical CO₂ for the inactivation of *Aspergillus niger* inoculated on stainless steel plates surface (NFP1092) Pp1747

M.A. da Silva^a, J. de Souza Ferreira^b, B.T. Iamanaka^c, F.S. Kihara^a, R.S. Cutolo^a, T.G. Kieckbusch^a

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Non-aqueous thermal processing of foods (NFP1228) Pp1749

R. Steele, C. Kerjean

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High Pressure Processing

P-NFP 2

A mathematical approach for using multiple enzyme based pressure-temperature-time integrators (PTTIs) for high pressure process evaluation (NFP3) Pp1653

E. Gogou, P.Taoukis

School of Chemical Engineering, NTUA, Greece

Effect of high hydrostatic pressure treatments on physicochemical properties, microbial quality and sensory attributes of beef *carpaccio* (NFP1068) Pp1655

N. Szerman^{a,b}, Y. Barrio^{b,c}, B. Schroeder^c, P. Martinez^c, A. Sancho^a, C. Sanow^a, S.R. Vaudagna^{a,b,c,d}

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Rheological properties of high pressure milk cream (NFP161) Pp1657

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Effects of HHP combined with blanching on microorganisms and qualities of cloudy and clear strawberry juices (NFP273) Pp1659

X. Cao, Y. Zhang, X. Liao, X. Hu

College of Food Science and Nutritional Engineering, China Agricultural University, China

Effect of high pressure homogenization process on *Bacillus stearothermophilus* and *Clostridium sporogenes* spores in skim milk (NFP364) Pp1661

C.R.G. Pinho, M.A. Franchi, A.A.L. Tribst, M. Cristianini

Department of Food Technology (DTA), School of Food Engineering (FEA), University of Campinas (UNICAMP), Brazil

Effect of ultra high pressure homogenization on alkaline phosphatase and lactoperoxidase activity in raw skim milk (NFP365) Pp1663

C.R.G. Pinho, M.A. Franchi, A.A.L. Tribst, M. Cristianini

Department of Food Technology (DTA), School of Food Engineering (FEA), University of Campinas (UNICAMP), Brazil

Changes in texture, structure and pectin of peach during pressurization, heating or processing of high-pressure-induced and heat-induced jam (NFP441) Pp1665

H. Kuwada^a, Y. Jibu^b, K. Nakamura^b, M. Tabuchi^b, Ai. Teramoto^c, K. Ishii^a, Y. Kimura^a, M. Fuchigami^a

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Effects of high pressure with the addition of sugar-alcohol on the improvement in texture and structure of frozen egg custard gel (NFP448) Pp1667

Y. Kimura^c, Ai. Teramoto^a, Y. Jibu^b, H. Kuwada^c, K. Ishii^c, M. Fuchigami^c

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MONDAY, MAY 23rd - POSTER SESSION 2**14:30-19:00****Process variables study on supercritical CO₂ extraction of Brazilian cherry seeds (*Eugenia uniflora* L.) rich in bioactive volatile (NFP550) Pp1669**

D. Nascimento e Santos, L.L. de Souza, N.J. Ferreira, A.L. de Oliveira
College of Animal Science and Food Engineering ou Faculdade de Zootecnia e Engenharia de Alimentos, University of São Paulo, Brazil

High hydrostatic pressure (HHP) microbial kinetics in orange comminuted (NFP569) Pp1671

V. Serment-Moreno, Z. Escobedo-Avellaneda, J. Welte-Chanes
Instituto Tecnológico y de Estudios Superiores de Monterrey, México

Research development of ultra-high pressure processing on fruit juice (NFP650) Pp1673

W. Han, S. Li, Z. Yunchuan, H. Qinghua, Z. Youbin
Chinese Academy of Agriculture Mechanization Sciences, China

Effects of high hydrostatic pressure on antioxidant activity, mineral and starch content and bioaccessibility, in apple (Granny smith) (NFP725) Pp1675

V. Briones-Labarca^a, G. Venegas-Cubillos^a, S. Ortiz-Portilla^a, M. Chacana-Ojeda^a, H. Maureira^b
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Microbiological stabilization of *Aloe vera* (*Aloe barbadensis* Miller) gel by high hydrostatic pressure treatments (NFP784) Pp1677

J.E. Reyes^a, G. Tabilo-Munizaga^a, M. Guanoquiza^a, A. Vega-Galvez^b, M. Miranda^b, M. Pérez-Won^b
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Establishment of a processing method for tofu using high pressure compared to the heat induced method (NFP934) Pp1679

Y. Jibu^a, K. Nakamura^a, Ai Teramoto^b, H. Kuwada^c, M. Fuchigami^c
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Enhanced infusion under high pressure: New insights (NFP1145) Pp1681

S. Mahadevan, M.V. Karwe
Department of Food Science, Rutgers University, USA

Structural changes of pectin methylesterase from orange peel subjected to thermal and high pressure processing (NFP1206) Pp1683

Z. Alexandrakis^a, T. Papadopoulos^b, F. Stavros^b, G. Katsaros^a, P. Katapodis^a, G. Nounesis^b, P. Taoukis^a
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Innovative value propositions for the food industry through non-thermal processing techniques (NFP1294) Pp1685

F. Purroy, C. Tonello
NC Hyperbaric SA, Spain

New technologies for the evaluation of quality and safety**P-MFS 1****Estimation of peroxidase activity in red cabbage by artificial neural network (ANN) (MFS272) Pp1751**

I. Shahabi Ghahfarrokhi^a, A. Daraei Garmakhany^b, S.M. Mousavi^c
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Quality classification of corn tortillas by means of cross validation between sensorial evaluation and computer vision system (MFS321) Pp1753

J.J. Chanona-Pérez^a, D. Mery^b, A. Soto^b, J.M. Aguilera^b, A. Cipriano^b, N. Veléz-Rivera^a, I. Arzate-Vázquez^a, G.F. Gutiérrez-López^a
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Effect of microwave blanching on acrylamide content and quality attributes of french fries (MFS374) Pp1755

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MONDAY, MAY 23rd - POSTER SESSION 2**14:30-19:00****Effects of application of transglutaminase in wheat proteins during the production of bread (MFS399) Pp1757**E.Ap. Guastaferrero Seravalli^a, A. Miwa Iguti^a, I.Ap. Santana^a, F. Finardi Filho^b^aMaua Institute of Technology, Brazil, ^bUniversity of Sao Paulo, Brazil**Agrophysical methods to determine bioenergetic status of agricultural products (MFS486) Pp1759**

J. Tys, J. Horabik, P. Baranowski

*Institute Of Agrophysics Pan, Metrology And Modelling Of Agrophysical Processes, Poland***Separation between high and low quality coffees by FTIR-ATR (MFS532) Pp1761**A.S. Franca^{a,b}, A.P. Craig^b, L.S. Oliveira^{a,b}^aDepartamento de Engenharia Mecânica, Universidade Federal de Minas Gerais (UFMG), Brazil, ^bPrograma de Pós-Graduação em Ciência de Alimentos (UFMG), Brazil**Effect of temperature on biospeckle activity in apples (MFS636) Pp1763**

A. Kurenda, A. Adamiak, A. Zdunek

*Department of Microstructure and Mechanics of Biomaterials, Institute of Agrophysics, Poland***Implementation of DNA technology in a Greek dairy company: An overview (MFS711) Pp1765**

E. Beletsiotis, D. Ghikas, K. Kalantzi

*DELTA FOODS S.A., Greece***Sensorial characteristics of goat milk cheeses made from ultra high-pressure homogenization-treated milk (MFS741) Pp1767**

B. Juan, J.M. Quevedo, B. Guamis, V. Ferragut, A.J. Trujillo

*Centre Especial de Recerca Planta de Tecnologia dels Aliments (CERPTA), XaRTA, TECNIO, MALTA Consolider, Departament de Ciència Animal i dels Aliments, Universitat Autònoma de Barcelona, Spain***User-friendly software predicting the microbial spoilage of emulsified acid foods (MFS878) Pp1769**

S.G. Manios, A. Psomas, P.N. Skandamis

*Laboratory of Food Quality Control and Hygiene, Department of Food Science and Technology, Agricultural University of Athens, Greece***Detection of fecal contamination on leafy greens by hyperspectral imaging (MFS917) Pp1771**S. Kang^a, K. Lee^a, J.-G. Lim^a, M.S. Kim^b^aRural Development Administration, Korea, ^bAgricultural Research Service, USDA, USA**Detection of mushroom Virus X (MVX) infection in asymptomatic mushrooms using FTIR microscopic imaging (MFS1034) Pp1773**L. Alvarez-Jubete^a, F. Bonnier^b, H. Byrne^b, H. Grogan^c, J.M. Frias^a^aDublin Institute of Technology, School of Food Science and Environmental Health, Ireland, ^bDublin Institute of Technology, FOCAS Research Institute, Ireland, ^cHorticultural Development Unit, Teagasc, Ireland**Design and validation of sensory focused processes of foods (MFS1073) Pp1775**

C. Tzia, V. Giannou, D. Lebesi, D. Sabanis, V. Polychniatou, P. Sfakianakis, C. Chranioti, P. Moutsatsou

*Laboratory of Food Chemistry and Technology, National Technical University of Athens, Greece***Rapid HPTLC-based method for quality control: Simultaneous chemical analysis and antioxidant activity determination in herbal, nutraceutical and functional foods (MFS1147) Pp1777**K. Muñoz^a, J. Calderón^a, E. Osorio^a, D. Castro^b, R. Serna^b, J. Díazb, J. Londoño^a^aUniversidad de Antioquia, Colombia, ^bUniversidad Católica de Oriente, Colombia**Nondestructive evaluation of watermelon ripeness using LDV (MFS1267) Pp1779**R. Abbaszadeh^a, A. Rajabipour^a, H. Ahmadi^a, M. Mahjoob^b, M. Delshad^c^aDepartment of Mechanic of Agricultural Machinery, University of Tehran, ^bFaculty of Mechanical Engineering, University of Tehran,^cDepartment of Horticultural Sciences, University of Tehran**Effect of pasteurization on bioactive amines in human milk (MFS1274) Pp1781**

F.F. Silva, M.B.A. Gloria

*LBqA – Laboratório de Bioquímica de Alimentos, Faculdade de Farmácia, UFMG, Brasil***Integration of new/rapid methods and ICTs to improve food safety and quality (MFS1296) Pp1783**D. Lebesi^a, A. Bilbao^b, A.I. Díaz^b, I. Papadaki^a, V. Oreopoulou^a^aLaboratory of Food Chemistry and Technology, School of Chemical Engineering, National Technical University of Athens, Greece,^bGAIKER Centro Tecnológico, IK4 Research Alliance, Parque Tecnológico, Spain***Pp:** Page number in Printed Proceedings

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Novel foods and ingredients

P-FPE 1

Comparative study of physico-chemical properties and acceptance analysis of different formulations of tapioca ice cream (FPE149) Pp2031

M.A. Chaves^a, I. Monteiro Andrade Barreto^a, R. Cardoso Reis^b

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Bread-making potential of pea protein isolate produced by a novel ultrafiltration/diafiltration process (FPE162) Pp2033

L.-P. Des Marchais, M. Foisy, S. Mercier, S. Villeneuve, M. Mondor

Food Research and Development Centre, Agriculture and Agri-Food Canada, Canada

Technology of functional public catering foods with dietary additives (FPE229) Pp2035

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Production of chromium-chelating peptides after hydrolysis of silk fibroin protein with elastase (FPE242) Pp2037

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Characterisation of pigments and antioxidant properties of three medicinal plants dried under different drying conditions (FPE307) Pp2039

D. Komes, A. Belščak-Cvitanović, D. Horžić, K. Marković, K. Kovačević Ganić

Faculty of Food Technology and Biotechnology, University of Zagreb, Croatia

Research on dehydrated fruit leathers: A review (FPE398) Pp2041

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Selection of potential probiotic Lactobacillus strains from human milk (FPE421) Pp2043

H. Yavuzdurmaz, S. Harsa

Izmir Institute of Technology, Turkey

Phenolics, betalains, ascorbic acid, and antioxidant activity of opuntia ficus-indica (FPE499) Pp2045

D.M. Jiménez-Aguilar, C. Hernández-Brenes, J.A. Gutierrez-Urbe, J. Welti-Chanes

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A novel emulsifier from spinach with appetite regulation abilities (FPE512) Pp2047

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Physico-chemical analysis, antioxidant capacity and vitamins of six ecotypes of Chilean Quinoa (Chenopodium quinoa Willd.) (FPE567) Pp2049

M. Miranda^a, A. Vega-Gálvez^{a,b}, E. Uribe^a, J. López^a, E. Martínez^b, M. José Rodríguez^a, I. Quispe^a, K. Di Scala^{c,d}

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Optimization xylitol production conditions from sunflower stalk (FPE661) Pp2051

O. Akpınar, R.S. Uysal, S. Sabancı, B. Sapci

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Effect of fat substitution on the textural properties of cake (FPE691) Pp2053

V. Psimouli, V. Oreopoulou

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MONDAY, MAY 23rd - POSTER SESSION 2**14:30-19:00****Determination of fructooligosaccharides (FOS) with FT-IR in cereals. Their impact as substitute sweeteners in starch based desserts (FPE787) Pp2055**

S.V. Protonotariou^a, C. Pappas^b, P.A. Tarantilis^b, M. Polissiou^b, S. Yanniotis^a, V. Evageliou^c, I. Mandala^a
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The antioxidant properties of honey beer (FPE850) Pp2057

A. Kalušević, G. Uzelac, M. Veljović, S. Despotović, M. Milutinović, I. Leskošek-Čukalović, V. Nedović
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Evaluation of green coconut (*Cocos Nucifera* L.) pulp for use as milk, fat and emulsifier replacer in ice cream (FPE897) Pp2059

I. Aparecida Santana, E.P. Ribeiro, A.M. Iguti
Maua Institute of Technology, Brazil

Antioxidant activity and phenolic content of extracts from different *Pterospartum tridentatum* populations growing in Portugal (FPE1149) Pp2061

M.T. Coelho^a, J.C. Gonçalves^a, V. Alves^b, M. Moldão-Martins^b
^aEscola Superior Agrária de Castelo Branco, Quinta Sra de Mércules, ^bCEER – Biosystems Engineering. ISA. Technical University of Lisbon, Portugal

Physicochemical characterization of monoacylglycerols from sunflower oil (FPE1245) Pp2063

C.S Galúcio^a, R.A. Souza^a, M.A. Stahl^b, P. Sbaite^a, C.I. Benites^a, M.R. Wolf Maciel^a
^aLaboratory of Separation Process Development (LDPS), School of Chemical Engineering (FEQ), ^bLaboratory of Oils and Fats, School of Food Engineering (FEA), University of Campinas (UNICAMP), Brazil

Antioxidant activity of the polyamines spermine and spermidine in soybean oil (FPE1275) Pp2065

A. Correa Mendonça, M.B.A. Gloria
LBqA – Laboratório de Bioquímica de Alimentos, Faculdade de Farmácia, UFMG, Brasil

Concentration and dehydration processes**P-AFT 4****Progressive freeze-concentration: Improvement and applications (AFT53) Pp1969**

O. Miyawaki
Department of Food Science, Ishikawa Prefectural University, Japan

Study of color and shrinkage of *Physalis peruviana* during convective drying by computer vision (AFT212) Pp1971

L. Puente^a, C. Pinto^a, E. Echegaray^a, E. Castro^a, M. Cortés^b
^aFood Science and Chemical Technology Department, Universidad de Chile, Chile, ^bAgrícola and Food Engineering Department, Universidad Nacional de Colombia, Colombia

Optimization of osmotic dehydration process coupled with ohmic heating using granny smith apples (AFT313) Pp1973

A. Sepúlveda^a, S. Sastry^d, J. Moreno^c, H. Nuñez^a, S. Almonacid^{a,b}, R. Simpson^{a,b}
^aDepartamento de Ingeniería Química y Ambiental, Universidad Técnica Federico Santa María, Chile, ^bCentro Regional de Estudios en Alimentos Saludables, Chile, ^cDepartamento de Ingeniería en Alimentos, Universidad del Bío-Bío, Chile, ^dDepartment of Food, Agricultural and Biological Engineering, Ohio State University, USA

Analysis of the quality attributes of osmotically dehydrated mango (AFT337) Pp1975

M.A. Khan^a, L. Ahrné^b, J. Oliveira^b
^aChemical Engineering Department, University Eduardo Mondlane, Mozambique, ^bUniversity College Cork, Ireland

Osmotic dehydration process coupled with ohmic heating using granny smith apples and its effects on product quality (AFT387) Pp1977

R. Simpson^{a,b}, C. Farias^a, V. Medina^a, S. Almonacid^{a,b}, H. Nuñez^a
^aDepartamento de Ingeniería Química y Ambiental, Universidad Técnica Federico Santa María, Chile, ^bCentro Regional de Estudios en Alimentos Saludables, Chile

Physico-chemical, rheological and sensory properties of shamia date sheets (AFT390) Pp1979

K. Youssef, A. Shatta, T. Moussa-Ayoub, S. El-Samahy
Faculty Of Agriculture, Suez Canal University, Egypt

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MONDAY, MAY 23rd - POSTER SESSION 2**14:30-19:00****Color stability of spinach leaves during freeze processing steps (AFT393) Pp1981**

K. Youssef, A. Shatta, A. Al-Sanabani, S. El-Samahy

*Faculty Of Agriculture, Suez Canal University, Egypt***Study on combined hot-air and microwave vacuum drying for scallion (AFT424) Pp1983**

Y. Li, S. Li, B. Yang, Q. Han, J. Ma, D. Zhao

*Chinese Academy of Agricultural Mechanization Sciences, China***Experimental study of vacuum discharge in microwave freeze-drying process (AFT495) Pp1985**

Y. Cao, S. Li, B. Yang, F. Zhao, D. Su, Q. Zhao

*Chinese Academy of Agricultural Mechanization Sciences, China***Ultrasound application as pre-treatment for drying of fruits (AFT519) Pp1987**F.A.N. Fernandes^a, S. Rodrigues^b^a*Departamento de Engenharia Química, Universidade Federal do Ceará, Brazil*, ^b*Departamento de Tecnologia de Alimentos, Universidade Federal do Ceará, Brazil***A basic investigation on instant coffee production by vacuum belt drying (AFT544) Pp1989**K. Burmester^a, A. Pietsch^b, R. Eggers^a^a*University of Technology Hamburg, Germany*, ^b*Eurotechnica GmbH, Germany***Shrinkage of papaya (*Carica papaya* L.) during convective drying: Influence of glass transition phenomenon (AFT556) Pp1991**L.E. Kurozawa^{a,c}, M.D. Hubinger^b, K.J. Park^c^a*Department of Food Technology, Rural Federal University of Rio de Janeiro, Brazil*, ^b*School of Food Engineering, University of Campinas, Brazil*, ^c*School of Agricultural Engineering, University of Campinas, Brazil***Influence of sucrose replacement on colour and texture of kiwi jam (AFT652) Pp1993**

E. Rosa, I. Peinado, A. Heredia, A. Andrés

*Institute of Food Engineering for Development, Universidad Politécnica de Valencia, Spain***Influence of dry and wet osmotic dehydration on colour and texture of a spread kiwi product (AFT654) Pp1995**

I. Peinado, E. Rosa, A. Heredia, A. Andrés

*Institute of Food Engineering for Development, Universidad Politécnica de Valencia, Spain***Quality assessment of dried eggplant using different drying methods: hot air drying, vacuum freeze drying and atmospheric freeze drying (AFT870) Pp1997**

J.V. Santacatalina, C. Ozuna, J.A. Cárcel, J.V. García-Pérez, A. Mulet

*Departamento de Tecnología de Alimentos, Universidad Politécnica de Valencia, Spain***Effect of fluidized-bed drying on the microstructure of higuierilla seeds (*Ricinus communis*). An alternative source of protein and biofuel (AFT898) Pp1999**J.J. Chanona Pérez^a, E. Terrés Rojas^b, J.A. Mendoza Pérez^c, H.M. Hernández^a, G.F. Gutiérrez López^a, V. Garibay Febles^b, M. de Jesús Perea Flores^a^a*Departamento de Graduados e Investigación en Alimentos, Instituto Politécnico Nacional, México*, ^b*Laboratorio de Microscopía Electrónica de Ultra Alta Resolución, Instituto Mexicano del Petróleo, México*, ^c*Departamento de Ingeniería en Sistemas Ambientales, Instituto Politécnico Nacional, México***A simple mathematical model proposed to predict kinetics of mass transfer in osmotic dehydration of muskmelon (AFT1070) Pp2001**J. Lucena Barbosa^{a,c}, D.G. Correa Moreira Rocha^a, M.I. Martins Jacintho Barbosa^a, M. Cordeiro Mancini^b, M. Dupas Hubinger^c^a*IT/UFRRJ, Department of Food Technology, Brazil*, ^b*IT/UFRRJ, Department of Chemical Engineering, Brazil*, ^c*FEA/UNICAMP, Department of Food Engineering, Brazil***Drying characteristics of Açaí (*Euterpe oleracea*) (AFT1090) Pp2003**

A.M. Barbosa Neto, L.G. Marques, M.M. Prado

*Department of Chemical Engineering, Federal University of Sergipe, Brazil***Vitamin C content of freeze-dried tropical fruits (AFT1148) Pp2005**L.G. Marques^a, M.M. Prado^a, J.T. Freire^b^a*Department of Chemical Engineering, Federal University of Sergipe, Brazil*, ^b*Department of Chemical Engineering, Federal University of São Carlos, Brazil****Pp: Page number in Printed Proceedings**

Rehydration characteristics of freeze-dried avocado (*Persea americana*) (AFT1155) Pp2007

D.S. Souza^a, J.D.R. Pimentel^a, M.M. Prado^b, L.G. Marques^b, N. Narain^a

^aPost-Graduate Program in Food Science and Technology (NUCTA, Federal University of Sergipe, Brazil), ^bDepartment of Chemical Engineering, Federal University of Sergipe, Brazil

TUESDAY, MAY 24th - POSTER SESSION 3

08:30-13:00

Micro- and nano- sciences and technology

P-FMS 1

Morphology and fluorescence properties of dye-entrapped silica nanoparticles (FMS186) Pp823

N. Kim, S.-M. Oh, C.-T. Kim, C.-J. Kim, Y.-J. Cho

Food Bio-nano Technology Research Group, Korea Food Research Institute, Republic of Korea

Microencapsulation of potential probiotic lactobacilli by extrusion technique (FMS349) Pp825

T. Petrović^a, Z. Radulović^a, D. Radić^a, S. Dimitrijević^b, B. Bogicević^c, V. Nedović^a

^aInstitute of Food Technology and Biochemistry, Faculty of Agriculture, University of Belgrade, Serbia, ^bDepartment of Biochemical Engineering and Biotechnology, Faculty of Technology and Metallurgy, University of Belgrade, Serbia, ^cLaboratory of Food Biotechnology, Institute of Food Science and Nutrition, ETH Zürich, Switzerland

Farmed sea bass and seabream: A new opportunity for high quality heat-induced gel products (FMS368) Pp827

C. Cardoso, R. Mendes, P. Vaz-Pires, L. Nunes

Portuguese Institute of Biological Resources, Portugal

Preliminary studies of process conditions of linseed oil microencapsulation by spray drying (FMS369) Pp829

E. Morales, M. Rubilar, C. Shene, F. Acevedo, B. Palma

Universidad De La Frontera, Chile

Preparation of size-tailored, similar surface characteristic chitosan nanoparticle by ionotropic gelation (FMS429) Pp831

H.H. Nguyen, S.-Y.-R. Paik, S.-C. Yang, P.S. Lee, P. Puligundla, S. Ko

Sejong University, Korea

Characterization of whey protein-polyphenol interactions by dynamic light scattering (FMS509) Pp833

M. von Staszewski^{a,c}, R.J. Jagus^a, A.M.R. Pilosof^{b,c}

^aDepto. Ingeniería Química, FI-UBA, Argentina, ^bDepto. Industrias, FCEN-UBA, Argentina, ^cConsejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina

Impact of flour heat treatment on cake batters (FMS782) Pp835

A. Chesterton^a, P. Sadd^b, B.E. Meza^c, G. Moggridge^a, D.I. Wilson^a

^aDepartment of Chemical Engineering and Biotechnology, University of Cambridge, UK, ^bPremier Foods Central Technical, ^cInstituto de Desarrollo Tecnológico para la Industria Química, Consejo Nacional de Investigaciones Científicas y Técnicas, Universidad Nacional del Litoral, Argentina

Interfacial adsorption and shear flow properties of gum arabic-sodium caseinate mixtures (FMS914) Pp837

B. Bonilla-Reyna, M.G. Sosa-Herrera, L.P. Martínez-Padilla

Universidad Nacional Autónoma de México, Facultad de Estudios Superiores Cuautitlán, Departamento de Ingeniería y Tecnología, Laboratorio de Propiedades Reológicas y Funcionales en Alimentos México

Effect of oil in emulsion and homogenization pressure on the microencapsulation of basil oil (FMS947) Pp839

L. C. García^{a,b}, R. V. Tonon^{a,c}, M. D. Hubinger^a

^aDepartment of Food Engineering, Faculty of Food Engineering, University of Campinas, Campinas, Brazil, ^bEmbrapa Agroenergia, Brazil, ^cEmbrapa Food Technology, Rio de Janeiro, Brazil

Coffee oil microencapsulation using spray dryer (FMS949) Pp841

A. Vanzo^a, L. García^{a,b}, M. Hubinger^a

^aDepartment of Food Engineering, Faculty of Food Engineering, University of Campinas, Brazil, ^bEmbrapa Agroenergia, Brazil

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TUESDAY, MAY 24th - POSTER SESSION 3**08:30-13:00****Possibilities of X-ray nano-CT for internal quality assessment of food products (FMS112) Pp843**E. Herremans^a, S. Chassagne-Berces^b, H. Chanvrier^b, A. Atoniuk^c, R. Kuztal^c, E. Bongaers^d, B.E. Verlinden^e, E. Jakubczyk^f, P. Estrade^g, P. Verboven^a, B. Nicolai^{a,e}^aKatholieke Universiteit Leuven, Belgium, ^bNESTEC SA, Nestle PTC. Switzerland, ^cCHABER Ltd, Poland, ^dSkyScan NV, Belgium, ^eVCBT, Flanders Centre of Postharvest Technology, Belgium, ^fSGGW, Warsaw University of Life Sciences, Dep. Food Eng. & Process MGMT, Poland, ^gVSG, Visualization Sciences Group SAS, France**Effect of fibres and whole grain content on quality attributes of extruded cereals (FMS119) Pp845**S. Chassagne-Berces^a, M. Leitner^b, A. Melado^c, P. Barreiro^c, E. Crostina Correa^c, I. Blank^a, J.-C. Gumy^a, H. Chanvrier^a^aNESTEC SA Switzerland, ^bRECENDT, Austria, ^cUPM, Spain**The nanostructure's management is the basis for a functional fatty foods' production (FMS1227) Pp847**

S.V. Ivanov, T.A. Rashevskaya

National University of Food Technologies, Kiev, Ukraine

Analysis of the effect of perforation on the permeability of biodegradable non-barrier films (FMS1251) Pp849

A. Mistriotis, A. Giannoulis, D. Giannopoulos, D. Briassoulis

Agricultural University of Athens, Depart of Natural Resources and Agricultural Engineering, Greece

Detection and isolation of *Vibrio spp.* in seafood with cultural and molecular method (FMS1252) Pp851

D.B. Yaman, G. Türköz, F. Bakırcı

Aybak Natura Food Analyses Laboratory, Turkey

Food dispersions and emulsions**P-FMS 5****Rheological and microstructural characterization of whey protein isolate (WPI) stabilized emulsions formed by ultrasound (FMS17) Pp921**P. Bellalta^a, E. Troncoso^b, R.N. Zúñiga^b, J.M. Aguilera^b^aDepartment of Chemical Engineering, Universidad de Santiago de Chile, Chile, ^bDepartment of Chemical and Bioprocesses Engineering, Pontificia Universidad Católica de Chile, Chile**Effect of processing conditions and composition on sodium caseinate emulsions stability (FMS191) Pp923**C. Huck-Iriart^{a,b}, R.J. Candal^{b,c}, M.L. Herrera^a^aUniversity of Buenos Aires, FCEN, Argentina, ^bINQUIMAE, CONICET, Argentina, ^cNational University of San Martin (UNSAM), School of Science and Technology, Campus Miguelete, Argentina**Beta-carotene delivery systems stabilised by dairy proteins (FMS197) Pp925**

L. Cornacchia, Y.H. Roos

School of Food and Nutritional Sciences, University College Cork, Ireland

Antioxidative properties of acyl ascorbates in o/w emulsion (FMS240) Pp927Y. Watanabe^a, S. Adachi^b^aDepartment of Biotechnology and Chemistry, Faculty of Engineering, Kinki University, Japan, ^bDivision of Food Science and Biotechnology, Graduate School of Agriculture, Kyoto University, Japan**Development of nanoemulsions by an emulsification-evaporation technique (FMS271) Pp929**E. Troncoso^a, J.M. Aguilera^a, D.J. McClements^b^aDepartment of Chemical and Bioprocesses Engineering, Pontificia Universidad Católica de Chile, Chile, ^bDepartment of Food Science, University of Massachusetts, USA**Preparation and characterization of β -carotene nanodispersions stabilized by polyglycerol esters of fatty acids using solvent displacement technique (FMS626) Pp931**L.-J. Yin^a, P. Wang^a, L.-T. Li^a, M. Nakajim^{a,b}^aCollege of Food Science and Nutritional Engineering, China Agricultural University, China, ^bGraduate School of Life Environmental Sciences, University of Tsukuba, Japan***Pp: Page number in Printed Proceedings**

TUESDAY, MAY 24th - POSTER SESSION 3

08:30-13:00

O/W emulsions stabilized by whey protein: Influence of heat treatment and high pressure homogenization (FMS880) Pp933

R. de Araujo Mantovani^a, Á. Luiz Fazani Cavallieri^{a,b}, R. Lopes da Cunha^{a*}

^aDepartment of Food Engineering, Faculty of Food Engineering, University of Campinas (UNICAMP), Brazil, ^bDepartment of Food Science, School of Agriculture and Food Engineering, Federal University of Goiás (UFG), Brazil

Effect of oil content and surfactant addition on color and mechanical properties of hydroxypropyl methylcellulose emulsion-based edible films (FMS957) Pp935

R.N. Zúñiga^a, F. Osorio^b, J.M. Aguilera^a, F. Pedreschi^a

^aDepartment of Chemical and Bioprocess Engineering, Pontificia Universidad Católica de Chile, Chile, ^bDepartment of Food Science and Technology, Universidad de Santiago de Chile, Chile

Production characteristics of uniform large soybean oil droplets by microchannel emulsification using asymmetric through-holes (FMS958) Pp937

I. Kobayashi^a, M.A. Neves^{a,b}, K. Uemura^a, M. Nakajima^{a,b}

^aFood Engineering Division, National Food Research Institute, NARO, Japan, ^bGraduate School of Life and Environmental Sciences, University of Tsukuba, Japan

O/W emulsions stabilized from synergistic interaction between soy protein fractions (FMS1016) Pp939

F. de Assis Perrechil, V. Amorim Ramos, R. Lopes da Cunha

University of Campinas, Campinas, Brazil

Emulsifying capability evaluation of acylated gelatin (FMS1017) Pp941

C. dos Reis^{a,b}, R. Lopes da Cunha^a

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Olive oil micro-emulsions and study of the emulsifying ability of olive oil endogenous components (FMS1061) Pp943

V. Polychniatou, C. Tzia

Laboratory of Food Chemistry and Technology, School of Chemical Engineering, Greece

Mixing performance of various geometries – Emulsification perspective (FMS1135) Pp945

S.W. Siddiqui

School of Chemical Engineering, University of Birmingham, UK

Interactions of hydrolysed whey protein fractions/ι-carrageenan. Their impact in the formation of sub-micrometer o/w emulsions (FMS1137) Pp947

I. Mandala^{a,b}, Q. Huang^b

^a Food Science, Rutgers University, NJ, USA ^bAgricultural University of Athens, Food Science & Technology, Food Engineering Laboratory, Greece

Impact of effervescent atomization on oil drop size distribution of atomized oil-in-water emulsions (FMS1288) Pp949

J. Schröder, F. Werner, V. Gaukel, H. P. Schuchmann

Karlsruhe Institute of Technology (KIT), Institute of Process Engineering in Life Sciences

Food structure, microstructure and nanostructure

P-FMS 8

Structure development studies of soft gels using a dynamic U-tube rheometer of novel design (FMS195) Pp1031

Z. Xu, S.N. Raphaelides

Food Process Engineering Laboratory, Department of Food Technology, ATEI of Thessaloniki, Greece

Response surface methodology in the development of actives and biodegradables nanocomposite films reinforced with montmorillonite (FMS210) Pp1033

F.M. Vanin, M.H. Hirano, E. Goncalves, R.A. Carvalho, I.C.F. Moraes, P.J.A. Sobral

University of Sao Paulo, Brazil

Testing meat tenderness using an in situ straining stage with variable pressure scanning electron microscopy (FMS225) Pp1035

B. James, S.W. Yang

Chemical and Materials Engineering, University of Auckland, New Zealand

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TUESDAY, MAY 24th - POSTER SESSION 3**08:30-13:00****Effects of operating parameters on the encapsulation of grape seed extract by SEDS Technique (FMS258) Pp1037**I. Dalmolin^a, A.M. de Cesaro^b, M.A. Mazutti^c, M.A.A. Meireles^a, E.A.C. Batista^a, J.V. Oliveira^b^aDepartment of Food Engineering, School of Food Engineering, University of Campinas, Brazil, ^bDepartment of Food Engineering, URI, Campus de Erechim, Brazil, ^cDepartment of Chemical Engineering, Federal University of Santa Maria, Brazil**Protein nanotubes constructed from whey based α -lactalbumin (FMS276) Pp1039**Ö. Tarhan^a, V. Gökmen^b, Ş. Harsa^a^aFood Eng. Dept., İzmir Institute of Technology, Urla Campus, Turkey, ^bFood Eng. Dept., Hacettepe University, Beytepe Campus, Turkey**A bioinformatic approach to identification and analysis of hydrophobins in *Aspergillus* (FMS449) Pp1043**K.A Littlejohn^a, P.W. Cox^a, P. Hooley^b^aSchool of Chemical Engineering, Edgbaston, UK, ^bSchool of Applied Sciences, University of Wolverhampton, UK**Microstructural characterization of edible films by microscopy techniques and textural features (FMS541) Pp1045**J.-J. Chanona-Pérez^a, I. Arzate-Vazquez^a, A. Martínez-Rivas^b, G. Calderón Domínguez^a, L. Guadarrama Fernández^a, G.F. Gutiérrez López^a^aEscuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, Mexico, ^bCentro de Nanociencias y Micro y Nanotecnologías, Instituto Politécnico Nacional, Mexico**Comparative study of chemical and technological properties of Brazilian cocoa butter and industrial blends: Triacylglycerol composition and microstructure (FMS558) Pp1047**A.P. Badan Ribeiro^a, R. Claro da Silva^b, R. Grimaldi^c, L. Aparecida Guaraldo Gonçalves^c, L.A. Gioielli^b, T. Guenter Kieckbusch^a^aSchool of Chemical Engineering, University of Campinas, Brazil, ^bFaculty of Pharmaceutical Sciences, University of São Paulo, Brazil, ^cFaculty of Food Engineering, University of Campinas, Brazil**Comparative study of chemical and technological properties of Brazilian cocoa butter and industrial blends: Crystallization kinetics and polymorphic behavior (FMS560) Pp1049**A.P. Badan Ribeiro^a, R. Grimaldi^b, L. Aparecida Guaraldo Gonçalves^b, A. Oliviera dos Santos^c, L. Pavie Cardoso^d, T. Guenter Kieckbusch^a^aSchool of Chemical Engineering, University of Campinas, Brazil, ^bFaculty of Food Engineering, University of Campinas, Brazil, ^cSocial Sciences, Health and Technology Center, University of Maranhão, Brazil ^dInstitute of Physics Gleb Wataghin, University of Campinas, Brazil**Crystallinity and nanostructure of cellulose from different sources (FMS744) Pp1053**J. Cybulska^a, M. Szymańska-Chargot^a, A. Zdunek^a, K.M. Psonka-Antonczyk^b, B.T. Stokke^b^aInstitute of Agrophysics Polish Academy of Sciences, Poland, ^bDepartment of Physics, The Norwegian University of Science and Technology in Trondheim, Norway**Chitin nanocrystal dispersions: rheological and microstructural properties (FMS767) Pp1055**

M.V. Tzoumaki, T. Moschakis, C.G. Biliaderis

Department of Food Science and Technology, School of Agriculture, Aristotle University of Thessaloniki, Greece

Hyperspectral Scatter Imaging for contactless food quality evaluation (FMS941) Pp1057C. Erkinbaev^a, M. Tsuta^{a,b}, N. Nguyen Do Trong^a, P. Verboven^a, B. Nicolai^a, J. De Baerdemaeker^a, W. Saeys^a^aDepartment of Biosystem Engineering, Katholieke Universiteit Leuven, Belgium, ^bNational Food Research Institute, Japan**Features of the formation of hydrogen bonds in solutions of polysaccharides during their use in various industrial processes (FMS1008) Pp1059**V.Mank^a, O. Melnyk^b^aNational University of life and environmental sciences of Ukraine, ^bInstitute of Biocolloid Chemistry, National Academy of Sciences of Ukraine**Interaction of bubbles with sugar in bread (FMS1041) Pp1061**

L. Trinh, P. J. Martin

University of Manchester, UK

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TUESDAY, MAY 24th - POSTER SESSION 3**08:30-13:00****Improving structure of rice starch gel to resist freeze-thaw process by addition of Thai polysaccharides (FMS1044) Pp1063**

S. Charoenrein, N. Preechathamwong

*Department of Food Science and Technology, Faculty of Agro-Industry, Kasetsart University, Thailand***Effect of the addition of hardfats on technological properties of palm oil: solid fat content, consistency and crystallization kinetic (FMS1048) Pp1065**G. Marangoni de Oliveira^a, C. Chih Ming^b, A.P. Badan Ribeiro^a, T. Guenter Kieckbusch^a^a*School of Chemical Engineering, University of Campinas, Campinas, Brazil*, ^b*Faculty of Food Engineering, University of Campinas, Campinas, Brazil***Effect of pulsed vacuum and calcium lactate on the structure of red guavas osmotically dehydrated (FMS1080) Pp1057**G.S. Vieira^a, L.M. Pereira^a, S.M Carmello-Guerreiro^b, M.D. Hubinger^a^a*Department of Food Engineering, Faculty of Food Engineering, State University of Campinas, Brazil*, ^b*Department of Botany, Biology Institute, State University of Campinas, Brazil***Food grade nanoparticles obtained from natural source ingredients (FMS1083) Pp1069**A.C.K. Sato^a, M.A.C. Quintas^{b,c}, A.A. Vicente^b, R.L. Cunha^c^a*Department of Food Engineering, Faculty of Food Engineering, University of Campinas (UNICAMP), Campinas, Brazil*, ^b*IBB – Institute for Biotechnology and Bioengineering, Centre of Biological Engineering, University of Minho, Campus de Gualtar, Portugal*, ^c*CBQF/Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Portugal***Effect of collagen fiber and gelatin on gelling properties of alginate gels (FMS1085) Pp1071**

A.C.K. Sato, R.L. Cunha

*Department of Food Engineering, Faculty of Food Engineering, University of Campinas (UNICAMP), Brazil***Surface roughness reduces drainage in vacuum and atmospheric fried apple and potato slices (FMS1142) Pp1073**

V. Dueik, C. Moreno, P. Bouchon

*Department of Chemical and Bioprocess Engineering, Pontificia Universidad Católica de Chile, Chile***Effect of glycerol on water sorption of bovine gelatin films in the glassy state (FMS1144) Pp1075**

P. Díaz, C. Arratia, C. Vásquez, F. Osorio, J. Enrione

*Departamento de Ciencias y Tecnología de Alimentos, Universidad de Santiago, Chile***Effect of melting profile on bioaccessibility of structured lipids (FMS1180) Pp1079**

M. Farfán, M. Villalón, M.E. Ortíz, P. Bouchon

*Pontificia Universidad Católica De Chile, Chile***Flaxseed additive application in dairy products production (FMS1226) Pp1081**

S. Ivanov, T. Rashevskaya, M. Makhonina

*National University of Food Technologies, Ukraine***Diafiltration of ultrafiltration retentate of whey from white brined cheese (FMS1255) Pp1083**

M. Dushkova, N. Menkov

*University of Food Technologies, Bulgaria***Structure-function relations of food constituents in composite food matrices****P-FMS 12****Production and characterization of multicomponent films based on polysaccharides, gelatin and lipids:****Effect of surfactants addition (FMS175) Pp1139**H. Chambi^a, C. Grosso^b^a*Food Engineering Department, Faculty of Animal Science and Food Engineering, University of São Paulo, Brazil*, ^b*Food and Nutrition Department, Faculty of Food Engineering, State University of Campinas, Brazil***Rheological properties of protein/polysaccharide blends as affected by time-dependent phase separation (FMS251) Pp1141**F. Jara^{a,b}, A.M.R. Pilosof^{a,b}^a*Laboratorio de Biopolímeros, Nano partículas y Coloides Alimentarios, Dpto. Industrias, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina*, ^b*Consejo Nacional de Investigaciones Científica y Técnicas (CONICET), Argentina****Pp: Page number in Printed Proceedings**

TUESDAY, MAY 24th - POSTER SESSION 3**08:30-13:00****Effect of drying conditions on the properties of gelatin-based films plasticized with tributyl citrate (FMS295) Pp1143**

F.P. Carrion, L.N. Remédio, F.M. Vanin, P.J.A. Sobral, R.A. Carvalho

*Food Engineering Department, FZEA, University of São Paulo, Brazil***Three-dimensional measuring technique for internal structure of ice cream (FMS344) Pp1145**D.O. Gabsoo^a, H. Kawanishi^a, Y. Bae^b, S. Ueno^c^a*College of Bio resource Sciences, Nihon University, Japan*, ^b*College of Agriculture and Life Sciences, Suncheon National University, Korea*, ^c*Graduate School of Agricultural Sciences, Tohoku University, Japan***The application of acoustic emission to measure texture of food foams (FMS482) Pp1147**

E. Jakubczyk, E. Gondek

*Department of Food Engineering and Process Management, Warsaw University of Life Sciences, Poland***Structural consequences of dry heating on Beta-lactoglobulin (β -Lg) under controlled pH (FMS516) Pp1149**

M. Gulzar, S. Bouhallab, T. Croguennec

*UMR 1253 STLO, INRA, AGROCAMPUS OUEST, France***Characterization of lentil flour extrudates (FMS538) Pp1151**Z. Hicsasmaz^a, H. Dogan^b, A. Gueven^c^a*Trakya University, Turkey*, ^b*Kansas State University, Manhattan, USA*, ^c*Tunceli University, Turkey***Influence of fruit maturity on texture and colour of puree products (FMS571) Pp1153**J. Suntudprom^a, A.R. East^a, J.E. Bronlund^{b,c}, S. Je Lee^d^a*Institute of Food, Nutrition and Human Health, College of Sciences, Massey University, New Zealand*, ^b*School of Engineering and Advanced Technology, College of Sciences, Massey University, New Zealand*, ^c*Riddet Institute, New Zealand*, ^d*Institute of Food, Nutrition and Human Health, College of Sciences, Massey University, New Zealand***Oil migration from whole almonds to surrounding chocolate (FMS581) Pp1155**K.L. McCarthy^a, A. Altan^b, M.J. McCarthy^a^a*Dept. of Food Science and Technology, University of California, USA*, ^b*Dept. of Food Engineering, University of Mersin, Turkey***Effect of storage time on quality of frozen French type dough and bread (FMS583) Pp1157**E. Magaña-Barajas^a, B. Ramírez-Wong^b, P.I. Torres^b, D. Sánchez-Machado^c, J. López-Cervantes^c, C. Reyes-Moreno^d, J. Millán-Carrillo^d^a*Estudiante del Doctorado en Ciencias en Biotecnología del Instituto Tecnológico de Sonora (ITSON), México*, ^b*Departamento de Investigación y Posgrado en Alimentos (DIPA) de la Universidad de Sonora, México* ^c*Departamento de Biotecnología y Ciencias Alimentarias, ITSON, México*, ^d*Facultad de Ciencias Químico Biológicas, Universidad Autónoma de Sinaloa, México***Characterization of salmon gelatin based film on antimicrobial properties of chitosan against *E. coli* (FMS1015) Pp1159**D. Celis^a, M.I. Azocar^b, J. Enrione^a, M. Paez^b, S. Matiacevich^a^a*Departamento de Ciencia y Tecnología de los Alimentos, Facultad Tecnológica, Chile*, ^b*Departamento de Química de los Materiales, Facultad de Química y Biología, Universidad de Santiago de Chile***Muscle profiling: Characterizing the muscle of Brazilian cattle breed "Crioulo Lageano" (FMS1021) Pp1161**M. Leite Mitterer-Daltoé^a, L. Queiroz zepka^b, E. Martins^c, V.M. Martins^c, F. Cristinapetry^a, D. Farias de Farias^a, M.I. Queiroz^a^a*Food and Chemistry School, Federal University of Rio Grande (FURG)*, ^b*Department of Food Technology and Science, Federal University of Santa Maria (UFSM), Brazil*, ^c*Brazilian Agricultural Research Corporation's (EMBRAPA), Brazil***Quantification of extractable α -tocopherol in spray dried capsules and its relation with the homogenization process (FMS1175) Pp1163**M.-X. Quintanilla-Carvajal^a, L.-S. Meraz-Torres^a, A. Monroy-Villagrana^a, C. Cano-Sarmiento^a, L. Alamilla-Beltrán^a, M.-E. Jaramillo-Flores^a, H. Hernández-Sánchez^a, A. Jimenez-Aparicio^b, G.-F. Gutierrez-López^a^a*Departamento de Graduados e Investigación en Alimentos, Escuela Nacional de Ciencias Biológicas-IPN, México*, ^b*Centro de Desarrollo de Productos Bióticos CEPROBI, Laboratorio de Microscopia, Carretera Yautepec-Jajutla, México****Pp: Page number in Printed Proceedings**

TUESDAY, MAY 24th - POSTER SESSION 3

08:30-13:00

Design and processing of functional products

P-FPE 3

Encapsulation of natural flavors for use in dairy products (FMS1158) Pp2067

S.D. Santos^a, S.M. Ressurreição^a, R.F. Marques^a, C.V. Santos^a, A.M. Silva^a, M.E. Pintado^b

^aEscola Superior Agrária de Coimbra (ESAC), Instituto Politécnico de Coimbra, Portugal, ^bEscola Superior de Biotecnologia (ESB), Universidade Católica Portuguesa, Portugal

Effects of dietary fiber on structure formation in bread during baking process (FPE143) Pp2069

A. Romano^a, E. Torrieri^{a,b}, P. Masi^{a,b}, S. Cavella^{a,b}

^aCAISIAL/Centre of Food Innovation and Development in the Food Industry, University of Naples Federico II, Italy, ^bDepartment of Food Science, University of Naples Federico II, Italy

Extraction techniques of red and green propolis: extraction yield of phenolic compounds (FPE411) Pp2071

L. Paviani, P. Sacoda, E. Saito, F. Cabral

Department of Food Engineering, State University of Campinas, Brazil

Correlation of hydro-thermal processing with rutin content in tartary buckwheat flour (FPE417) Pp2073

J. Yoo, S.M. Lee, S. Heo, S.-H. Yoo, S. Lee

Department of Food Science and Technology, Carbohydrate Bioproduct Research Center, Sejong University, Republic of Korea

Study of the influence of berry-blanching on syneresis in blueberry purées (FPE430) Pp2075

A. Brambilla^a, D. Maffi^b, A. Rizzolo^a

^aConsiglio per la Ricerca e Sperimentazione in Agricoltura, Unità di ricerca per i processi dell'industria agroalimentare (CRA-IAA), Italy, ^bUniversità degli Studi di Milano, Dipartimento di Produzione Vegetale, Italy

Quality properties of corn-based extrudates enriched with dietary fibers (FPE438) Pp2077

A.N. Giannini^a, M.K. Krokida^a, N.P. Zogzas^b

^aSchool of Chemical Engineering, National Technical University of Athens, Greece, ^bDepartment of Food Technology, Technological Educational Institute (TEI) of Athens, Greece

Processing of berries (FPE496) Pp2079

I. Sjöholm, J. Pullawan, M. Rayner

Department of Food Technology, Engineering and Nutrition, Lund University, Sweden

Aroma release and sensory perception of fruit candies model systems (FPE500) Pp2081

P. Piccone^a, S.L. Rastelli^b, P. Pittia^a

^aDepartment of Food Science, University of Teramo Mosciano S. Angelo (TE), Italy ^bGelco s.r.l. (Perfetti van Melle Group), Castelnuovo Vomano (TE), Italy

Effect of probiotic bacteria on chemical composition and sensory quality of fermented sausages (FPE559) Pp2083

Z. Radulović, D. Živković, N. Mirković, M. Petrušić, D. Paunović, M. Perunović, S. Stajić

Institute for Food Technology and Biochemistry, University of Belgrade, Serbia

Evaluation of probiotic containing microcapsules stability in different media (FPE589) Pp2085

L. Avallone Bueno^a, M. de Fátima Fonseca^b, D. Marques^b, F. Branco Shinagawa^b, A. Quintino, G. Locatelli^b, C. Pereira Quadros^b

^aPhysical Department, University Rural of Pernambuco, Brazil, ^bResearch Center of Probiotics, Technology Institute of Pernambuco, BioLogicus, Brazil

Effect of drying in aloe's functional components (FPE723) Pp2087

M. Krokida^a, A. Pappa^b, M. Agaloti^a

^aLaboratory of Process Analysis and Design, School of Chemical Engineering, National Technical University of Athens, Greece, ^bLaboratory of Analytical Chemistry, School of Chemical Engineering, National Technical University of Athens, Greece

Functional foods enriched in aloe vera. Effects of vacuum impregnation and temperature on the respiration rate and the respiratory quotient of some vegetables (FPE796) Pp2089

M.L. Gras, S. Sanzana, D. Vidal-Brotóns

Instituto Universitario de Ingeniería de Alimentos para el Desarrollo (IUIAD), Universidad Politécnica de Valencia, Spain

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TUESDAY, MAY 24th - POSTER SESSION 3**08:30-13:00****Production of 4th range Iceberg lettuce enriched with calcium. Evaluation of some quality parameters (FPE826) Pp2091**

M.L. Gras, D. Vidal-Brotóns, F.A. Vásquez-Forttes

*Instituto Universitario de Ingeniería de Alimentos para el Desarrollo (IUIAD), Universidad Politécnica de Valencia, Spain***Microencapsulation of probiotic bacteria with alginate and prebiotic and evaluation of survival in ice cream (FPE836) Pp2093**

L. Kunigk, W. H. Prieto C. Jurkiewicz, M.P.M. Boscaroli, R.G. Ferreira, E.P. Ribeiro

*Maua Institute of Technology, São Caetano do Sul, Brazil***The influence of operational parameters in the pectin agglomeration (FPE839) Pp2095**T.A. Medeiros Hirata^a, V. Goulart Machado^a, G. César Dacanal^b, F.C. Menegalli^a^a*Department of Food Engineering, University of Campinas, FEA/UNICAMP, Brazil, ^bDepartment of Food Engineering, University of São Paulo, FZEA/USP, Brazil***Antioxidant activity of microcapsules of *Rubus sp.* juice using spray drying (FPE912) Pp2097**M. Jimenez^a, E. Azuara^a, J. Vernon-Carter^b, G. Luna-Solano^c, C.I. Beristain^a^a*Instituto de Ciencias Básicas, Universidad Veracruzana, México, ^bUniversidad Autónoma de México, Distrito Federal, México, ^cInstituto Tecnológico de Orizaba, DEPI, México***Novel ways to control enzymatic hydrolysis as a tool to produce functional peptides (FPE919) Pp2099**E. Leeb^a, U. Kulozik^b, S. Cheison^a^a*Technische Universität München, Junior Research Group: Bioactive Peptides and Protein Technology, Germany, ^bTechnische Universität München, Food Process Engineering and Dairy Technology, Germany***Influence of the structure and composition of the País grape proanthocyanidins on the inhibition of angiotensin converting enzyme (FPE995) Pp2101**

S. Godoy, M. Roedel, E. Aspé, K. Fernández

*Chemical Engineering Department, University of Concepción, Chile***Kinetic characterization of inhibition of angiotensin converting enzyme by proanthocyanidins extracted from *Vitis vinifera* L. cv. País (FPE999) Pp2103**

K. Álvarez, M. Roedel, E. Aspé, K. Fernández

*Chemical Engineering Department, University of Concepción, Chile***Enzymatic depolymerisation of oat β -glucan (FPE1042) Pp2105**A.-I. Ninios^a, J. Sibakov^b, I. Mandala^a, K. Fasseas^a, K. Poutanen^b, E. Nordlund^b, P. Lehtinen^b^a*Department of Food Science and Technology, Agricultural University of Athens, Greece, ^bVTT Technical Research Centre of Finland, Finland***Parameters evaluation of fructooligosaccharides production by sucrose biotransformation using an osmophilic *Aureobasium pullulans* strain (FPE1165) Pp2107**J. Bueno da Silva^a, A.E. Cavalcante Fai^a, R. dos Santos^a, L.C. Basso^b, G.M. Pastore^a^a*University of Campinas, College of Food Engineering, Brazil, ^bUniversity of São Paulo, ESALQ, Brazil***Obtaining and characterization of mango peel powder and its use as a source of fiber and a functional ingredient in natural yogurt (FPE1195) Pp2109**

C. Ruiz, C. Ramírez, C. Gutiérrez de Piñeres, M. Ángulo, J. Hedreira

*National Service Learning, Center for Biotechnology Caribbean, Ccolombia***Influence of gamma radiation on sprouting inhibition of the rhizomes and on the quality of turmeric (FPE1277) Pp2111**

L. Peret-Almeida, M.B.A. Gloria

*LBqA – Laboratório de Bioquímica de Alimentos, Faculdade de Farmácia, UFMG, Brasil***Bioprocessing engineering****P-NFP 5****Characterization of novel cholesterol esterase from *Trichoderma sp.* AS59 with high ability to synthesize steryl esters (FMS523) Pp1721**

A. Maeda, N. Hashitani, T. Mizuno, M. Bunya

*Faculty of Engineering, Tokushima Bunri University, Japan****Pp: Page number in Printed Proceedings**

TUESDAY, MAY 24th - POSTER SESSION 3**08:30-13:00****Recovery of an antibacterial peptide fraction from snow crab by-products hydrolysate by electro dialysis with ultrafiltration membranes (NFP579) Pp1723**A. Doyen^{a,b}, L. Saucier^{a,c}, L. Beaulieu^{a,d}, Y. Pouliot^{a,b}, M. Araya-Farias^{a,b}, L. Bazinet^{a,b}^aInstitute of Nutraceutical and Functional Foods (INAF), Université Laval, Canada, ^bDepartment of Food Science and Nutrition, Université Laval, Canada, ^cDepartment of Animal Sciences, Université Laval, Canada, ^dDepartment of Biology, Chemistry and Geography, Université du Québec à Rimouski (UQAR), Canada**Prospection of bacterial endophytes isolated from Baru (*Dipteryx alata* Vog.) as a potential source of bioactive compounds (NFP1100) Pp1725**

G. Molina, A.P. Dionísio, M.R. Pimentel, G.T. Makita, R.C. dos Reis, G.M. Pastore

Department of Food Science, School of Food Engineering, University of Campinas (UNICAMP), Brazil

Biotransformation of R-(+)- and S-(−)-limonene by *Fusarium oxysporum* (NFP1162) Pp1727G. Molina^a, R.L. da Costa^a, A.P. Dionísio^a, J.L. Bicas^b, G.M. Pastore^a^aDepartment of Food Science, School of Food Engineering, University of Campinas (UNICAMP), Brazil, ^bCap, Federal University of São João Del Re, Brazil**Hygienic design and operation of food plants****P- HDO 1****Evaluation of rhamnolipids surfactants as agents to reduce the adhesion of *Staphylococcus aureus* to polystyrene surfaces (HDO249) Pp1549**

M.Z.V. Gomes, M. Nitschke

Chemistry Institute of São Carlos, University of São Paulo, Brazil

Bioindicators for UV-radiation – resistance of conidiospores of different *Aspergillus niger* strains (HDO300) Pp1551

J. Wunderlich, P. Muranyi, C. Uhl, K. Haas

Fraunhofer Institute for Process Engineering and Packaging IVV, Department Food Quality, Germany

Screening of Allergies and respiratory symptoms in Portuguese fish industries (HDO422) Pp1553M. Costa e Silva^a, R. Costa^a, J. Fonseca^b^aCERNAS, Escola Superior Agrária, Instituto Politécnico de Coimbra, Portugal, ^bFaculdade de Medicina da Universidade do Porto, Hospital de S. João, Portugal**Cleaning of sweet condensed milk: identified industrial improvements using a pilot plant (HDO862) Pp1555**

K. Asteriadou, A. Malik Othman, P.T. Robbins, P.J. Fryer

Centre of Formulation Engineering, University of Birmingham, UK

Cleaning in place: a source of contamination of food processing line? (HDO801) Pp1557C. Faille^a, T. Benezech^a, Y. Sylla^a, W. Blel^b^aINRA, UR638 Interface Processes and Hygiene of Materials France, ^bLaboratoire d'Ingénierie des MATériaux de Bretagne (LIMAT B - EA 4250), France**Fouling studies of food fat (HDO966) Pp1559**J.-Y. Huang^a, Y.M.J. Chew^b, D. Ian Wilson^a^aDepartment of Chemical Engineering and Biotechnology, University of Cambridge, UK, ^bDepartment of Chemical Engineering, University of Bath, UK**Removability of bacterial spores from solid surfaces during cleaning (HDO1053) Pp1561**

T. Sakiyama, Y. Nanasaki, T. Hagiwara, H. Watanabe

Tokyo University of Marine Science and Technology, Japan

Use of ozone in Clean in Place (CIP) systems at food processing plants (HDO1235) Pp1563

A. Canut, I. Llorca, V. Martinez, A. Pascual

Ainia, Research Association for Food Industry, Spain

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Food process design and economics

P-FPD 1

Honey bees: As a role model in production and organization activities (Review) (FPD284) Pp1597

F. Güney

Apiculture Research Institute, Turkey

Improving the energy efficiency of traditional multi-stage steam-jet-ejector vacuum systems for deodorizing edible oils (FPD405) Pp1599

S. Akterian

University of food technologies, Bulgaria

Power cuts in a refrigerator: effects on temperature profiles and food quality during storage (FPD406) Pp1601

J.-H. Tan, M. Farid, B. James, F.V.M. Silva

University of Auckland, Chemical And Materials Engineering, New Zealand

Effect of storage conditions on dried vegetal pear quality (FPD584) Pp1603

C.E. Xotlanihua^a, R. Cerecero^a, M. Jiménez^b, M. Calderón^c, G. Luna^a

^aDivisión de Estudios de Posgrado e Investigación, Instituto Tecnológico de Orizaba, México, ^bInstituto de Ciencias Básicas, Universidad Veracruzana, México, ^cLaboratorio de Investigación en Alimentos, Instituto Tecnológico de Tepic, México

Estimating analytically the capacity of batch plants with shared equipment: a yoghurt plant case study (FPD629) Pp1605

A. Koulouris

Alexandria Technological Educational Institute, Greece

Reducing energy consumption in food drying: opportunities in desiccant adsorption and other dehumidification strategies (FPD761) Pp1607

J.C. Atuonwu^a, X. Jin^a, G. van Straten^a, H.C. van Deventer^b, A.J.B. van Boxtel^a

^aSystems and Control Group, Wageningen University, Netherlands, ^bTNO Quality of Life, Netherlands

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State and phase transitions of food materials-relation to quality P-FMS 10**Control of resistant starch content of cookie by pre-dehydration treatment (FMS33) Pp1121**

K. Kawai, H. Kawai, Y. Hagura

*Department of Biofunctional Science and Technology, Hiroshima University, Japan***Evaluation salted duck eggs' aroma release by model of chewing with electronic nose (FMS96) Pp1123**L. Ming^{a,b}, T. Kang^a, P. Leiqing^a, T. Lin^a, Z. Ge^a, Z. Qiding^b, X. Zhenghe^b^aCollege of Food Science and Technology, Nanjing Agricultural University, China, ^bChina National Research Institute of Food & Fermentation Industries, China**Impact of starch gelatinization on the kinetics of Maillard reaction in potato dehydrated systems (FMS235)**N.C. Acevedo^a, C. Schebor^{a,b}, P. Buera^{a,b}^aDepartamentos de Industrias y de Química Orgánica. Facultad de Ciencias Exactas y Naturales. Universidad de Buenos Aires. Argentina, ^bMembers of CONICET, Argentina**Effect of addition of grape seed extract on the phase behavior of carbon dioxide + dichloromethane system (FMS259) Pp1125**I. Dalmolin^a, A.A. Rigo^b, M.A. Mazutti^c, M.A.A. Meireles^a, E.A.C. Batista^a, J.V. Oliveira^b^aDepartment of Food Engineering, School of Food Engineering, University of Campinas, Brazil, ^bDepartment of Food Engineering, URI, Campus de Erechim, Brazil, ^cDepartment of Chemical Engineering, Federal University of Santa Maria, Brazil**Influence of collapsed structure on β -carotene stability in freeze-dried mangoes (FMS435) Pp1127**

N. Harnkarnsujarit, S. Charoenrein

*Department of Food Science and Technology, Faculty of Agro-Industry, Kasetsart University, Thailand***Comparison of melting frost layers after 2 frozen methods in pork cuts (*Longissimus dorsi*) (FMS929) Pp1129**R. Meléndez-Pérez^{a,b}, M.E. Rosas-Mendoza^b, C. Mercado-Márquez^b, R.R. Velázquez-Castillo^a, J.L. Arjona-Román^b^aUniversidad Autónoma de Querétaro, Facultad de Ingeniería, Centro Universitario s/n Colonia las Campanas, Brazil, ^bU"AM. Facultad de Estudios Superiores Cuautitlán, Laboratorio de Análisis Térmico y Estructural de Alimentos, UIML13, México**Experimental phase diagrams of binary fatty acid mixtures containing oleic acid (FMS1106) Pp1131**M.C. Costa^a, M.P. Rolemberg^b, N.D.D. Carareto^a, C.Y.C.S. Kimura^a, M.A. Krahenbühl^c, A.J.A. Meirelles^a^aDepartment of Food Engineering – FEA – UNICAMP, Brazil, ^bDepartment of Chemical Technology - UFMA, Brazil, ^c Department of Chemical Processes – FEQ – UNICAMP, Brazil**Phase diagrams of binary fatty alcohol + fatty acid mixtures (FMS1114) Pp1133**

M.C. Costa, N.D.D. Carareto, A.J.A. Meirelles

*Department of Food Engineering – FEA – UNICAMP, Campinas, Brasil***Thermo-alkaline treatment. A process that changes the thermal properties of corn starch (FMS1181) Pp1135**P. Pineda-Gómez^{a,b}, D.F. Coral^b, D. Ramos-River^{a,b}, A. Rosales-River^{a,b}, M.E. Rodríguez-García^aUniversidad de Caldas, Manizales, Colombiaposidía, ^bUniversidad Nacional de Colombia, Colombia, ^cCentro de Física Aplicada y Tecnología Avanzada, Universidad Nacional Autónoma de México, Mexico**Phase solubility studies of terpineol with β -cyclodextrin and stability of the freeze-dried inclusion complex (FMS895)**

C. dos Santos Ferreira, M.F. Mazzobre, M. del Pilar Buera

*Facultad De Ciencias Exactas y Naturales, Universidad De Buenos Aires,Argentina****Pp: Page number in Printed Proceedings**

WEDNESDAY, MAY 25th - POSTER SESSION 4

08:30-13:00

Modeling food safety and quality

P-MFS 0

Modeling of Greek coffee aroma loss during storage at different temperatures and water activities (MFS40) Pp1853

E. Makri, D. Tsimogiannis, E. Dermesonluoglu, P. Taoukis

School of Chemical Engineering, NTUA, Greece

Combined effect of meat composition and heating parameters on the physicochemical state of proteins (MFS207) Pp1855

A. Promeprat, L. Le Louët, A. Kondjoyan, T. Astruc, V. Santé-Lhoutellier, P. Gatellier, J.D. Daudin

INRA, France

Biogenic amine levels in dry fermented sausages produced and sold in Greece (MFS362) Pp1857

E.J. Papavergou

Laboratory of Food Technology, Dep. of Food Hygiene & Food Technology of Animal Origin, Aristotle University of Thessaloniki, Greece

Spore inactivation by ultraviolet irradiation combining with different pre-heating treatment (MFS404) Pp1859

D. Hamanaka^a, H. Yamada^b, T. Kadoyanagi^b, V. Tryvittayasil^b, F. Tanaka^a, T. Uchino^a

^aFaculty of Agriculture, Kyushu University, Japan, ^bGraduate School of Biores. Bioenviron. Sci., Kyushu University, Japan

Aroma profile of different salted dried codfishes (MFS420) Pp1861

M. Costa Silva^a, L.R. Silva^b, P. Guedes-de-Pinho^c, P. Andrade^b, P. Valentão^b, R. Costa^a

^aAcernas, Escola Superior Agrária, Instituto Politécnico de Coimbra, Portugal, ^bREQUIMTE/Dept of Pharmacognosy, Faculty of Pharmacy, Porto University, Portugal, ^cREQUIMTE/Department of Toxicology, Faculty of Pharmacy, Porto University, Portugal

Influences of pH and temperature on infrared spectroscopic features of brewed coffee (MFS426) Pp1863

A. Hashimoto, Y. Sugimoto, K.-I. Suehara, T. Kameoka

Department of Sustainable Resource Sciences, Graduate School of Bioresources, Mie University, Japan

Comparison of wild and farmed sea bass (*Dicentrarchus labrax* L) lipid quality (MFS453) Pp1865

D. Lenas^a, S. Chatziantoniou^b, C. Nathanailides^a, D. Triantafillou^b

^aDept Aquaculture & Fisheries, TEI of Epirus, Greece, ^bAlexander Technological Institute of Thessaloniki, Dept Nutrition & Dietetics, Greece

Coupling between heat and mass transfer and stoichiometric models to bring insight into maillard reaction kinetics during baking of sponge-cake products (MFS507) Pp1867

C. Pénicaud^{a,b}, B. Broyart^{a,b}, D. Goujot^{a,b}, M. Courel^{a,b}, X.-M. Meyer^c, C. Bonazzi^{a,b}

^aAgroParisTech, UMR 1145 Ingénierie Procédés Aliments, France, ^bINRA, UMR 1145 Ingénierie Procédés Aliments, France, ^cUniversité de Toulouse, Laboratoire de Génie Chimique CNRS/INPT/UPS, France

A methodology for the certification of food-serving services according to the Mediterranean dietary model (MFS525) Pp1869

E. Grigoroudis^a, A. Psaroudaki^{b,c}

^aTechnical University of Crete, Greece, ^bTechnological Educational Institute of Crete, Greece, ^cAgricultural University of Athens, Greece

Bactericidal effect of Electrolyzed Oxidizing (EO) water on *E. coli* O157:H7- and *Salmonella*- inoculated beef, chicken, and shrimp (MFS563) Pp1871

J. Weese, T.-S. Huang

Poultry Science Department, Auburn University, USA

Predicting persimmon puree colour as a result of puree strength manipulation (MFS612) Pp1873

A.R. East^a, X.H. Tan^b, J. Suntudprom^a

^aInstitute of Food, Nutrition and Human Health, Massey University, New Zealand, ^bMassey University Singapore

Occurrence of furan in commercial samples of roasted coffee in Brazil (MFS816) Pp1875

A.P. Ariseto, E. Vicente, M.S. Ueno, M.C.F. Toledo

Institute of Food Technology, Campinas, Brazil

Potential of furan formation in roasted coffee as influenced by species and roast degree (MFS821) Pp1877

A.P. Ariseto, E. Vicente, M.S. Ueno, S.A.V. Tfouni, M.C.F. Toledo

Institute of Food Technology, Campinas, Brazil

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WEDNESDAY, MAY 25th - POSTER SESSION 4

08:30-13:00

Thermal inactivation of *Byssochlamys nivea* in pineapple juice combined with preliminary high pressure treatments (MFS833) Pp1879

E.H. da Rocha Ferreira^a, A. Rosenthal^b, V. Calado^a, J. Saraiva^c, S. Mendo^c, P. Rodrigues De Massaguer^d
^aFederal University of Rio de Janeiro, School of Chemical Engineering, Brazil, ^bEmbrapa Agroindústria de Alimentos, Brazil, ^cAveiro University, Department of Chemistry, Portugal, ^dAveiro University, Department of Biology, Portugal, ^eFundação Tropical de Pesquisas e Tecnologia André Tosello, LABTERMO, Brazil

Role of spices on acrylamide formation in buckwheat ginger cakes (MFS835) Pp1881

L. Marková^{a,b}, Z. Ciesarová^a, K. Kukurová^a, H. Zieliński^c, D. Zielińska^d, A. Bednáriková^a
^aVÚP Food Research Institute, Slovak Republic, ^bVUT University of Technology, Faculty of Chemistry, Czech Republic, ^cInstitute of Animal Reproduction and Food Research of Polish Academy of Sciences, Poland, ^dUniversity of Warmia and Mazury, Poland

Detection of deoxynivalenol in wheat flour using fluorescence fingerprint (MFS837) Pp1883

J. Sugiyama, K. Fujita, M. Tsuta, M. Kushiro

National Food Research Institute, Japan

Modeling of growth and ochratoxin A production of *Aspergillus carbonarius* and evaluation in food matrices: Effect of (gel) microstructure, water activity, and temperature (MFS877) Pp1885

A.E. Kapetanakou^a, A. Abavi^a, S. Yanniotis^b, E.H. Drosinos^a, P.N. Skandamis^a

^aFood Quality Control and Hygiene, Food Science & Technology, Agricultural University of Athens, Greece, ^bFood Process Engineering, Processing and Preservation of Agricultural Products, Food Science & Technology, Agricultural University of Athens, Greece

Modelling of in-mouth perception the case of sodium (MFS890) Pp1887

B.J.D. Le Révérend, I.T. Norton, S. Bakalis

School of Chemical Engineering, University of Birmingham, UK

Furan derivatives dynamic in rye bread processing (MFS948) Pp1889

V. Ozolina^a, D. Kunkulberga^a, B. Cieslak^b, M. Obiedzinski^b

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The effects of *heracleum platytaenium boiss* essential oil on the growth of *Ochratoxigenic penicillium verrucosum* (d-99756) isolated from kashar cheese (MFS1191) Pp1891

S. Ozcakmak^a, M. Dervisoglu^b, A. Akgun^c, A. Akcin^d, T. Aytas Akcin^e, F. Seyis^f

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The inhibition of contaminated molds by some essential oils in cheeses (MFS1192) Pp1893

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Fungicidal against *Aspergillus flavus* and decontaminate aflatoxinB1 with neutralized and acidic electrolyzed oxidizing water (MFS1253) Pp1895

Li Lite, Xiong Ke

College of Food Science and Nutritional Engineering, China Agricultural University, P.R.China

Risk assessment and safety assurance

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Determination of aflatoxin M1 in raw milk by HPLC marker as evidence of cattle-food storage conditions from the herd suppliers of a dairy company in the city of Valledupar (MFS68) Pp1817

E. Fragoso, T. David, S. Romero, H. Ospino

Universidad de Santander, Colombia

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WEDNESDAY, MAY 25th - POSTER SESSION 4**08:30-13:00****Improvement of harvesting and processing of cultivated fresh water prawn (*Macrobrachium rosenbergii*) (MFS543) Pp1821**

T.C.A. Silva, L.S. Arrieche

*Federal University of Espirito Santo, Brazil***Assessing the conditions of milk production on farms based on family farming (MFS574) Pp1823**M. da Penha Piccolo Ramos^a, F.C.N.N. Silva^b, L. Oliveira de Fariña^c, C.L. de Oliveira Pinto^d^a*Universidade Federal do Espírito Santo, UFES, Brazil*, ^b*Agente de Desenvolvimento Rural, Brazil*, ^c*Universidade Estadual do Oeste do Paraná, UNIOESTE, Brazil*, ^d*Empresa de Pesquisa Agropecuária de Minas Gerais, Brazil***Regeneration of frying oils by using adsorbent resins (MFS721) Pp1825**N. Göncüoğlu^a, B.A. Mogol^a, V. Gökmen^{a,b}^a*Department of Food Engineering*, ^b*Food Research Center, Hacettepe University, Turkey***Extending shelf life of watercress by means of alternative sanitizers and modified atmosphere packaging (MFS881) Pp1827**C. Char^{a,b}, P. Villena^a, A. Hinojosa^a, V. Escalona^{a,c}^a*Center of Postharvest Studies, University of Chile, Chile*, ^b*Agroindustry and Enology Department, Fac. Agricultural Sciences, University of Chile, Chile*, ^c*Agricultural Production Department, Fac. Agricultural Sciences, University of Chile, Chile***Effect of contamination stage and inoculum history on the survival and growth of *Listeria monocytogenes* in semi-hard and hard cheese (MFS884) Pp1831**

C.-I.A. Belessi, S. Arapaki, A.S. Gounadaki, P.N. Skandamis

*Laboratory of Food Quality Control and Hygiene, Department of Food Science and Technology, Agricultural University of Athens, Greece***Inoculated pack study of an intermediate moisture egg patty (MFS1001) Pp1833**

M. Richardson, A. Sikes, C. Lee, S. Walker

*U.S. Army Natick Soldier Research Development & Engineering Center, USA***HACCP implementation in public hospitals: a survey in Crete, Greece (MFS1101) Pp1835**E. Kokkinakis^{a,b}, A. Kokkinaki^a, G. Kyriakidis^b, A. Markaki^b, G.A. Fragkiadakis^b^a*Technological Education Institute (TEI) of Crete, Department of Commerce and Advertising, Greece*, ^b*Technological Education Institute (TEI) of Crete, Department of Nutrition and Dietetics, Greece***HACCP implementation in local food industry: a survey in Crete, Greece (MFS1116) Pp1837**E. Kokkinakis^{a,b}, A. Kokkinaki^a, G. Kyriakidis^b, A. Markaki^b, G.A. Fragkiadakis^b^a*Technological Education Institute (TEI) of Crete, Department of Commerce and Advertising, Greece*, ^b*Technological Education Institute (TEI) of Crete, Department of Nutrition and Dietetics, Greece***Cooling and freezing****P-AFT 1****Influence of different inulin types on bread quality in the process of freezing and thawing (AFT66) Pp1897**J.S. Filipović^a, Đ.B. Psodorov^a, N.K. Filipović^b, V.S. Filipović^c^a*Institute for Food Technology, Serbia*, ^b*Faculty of Technology, Serbia*, ^c*Mlinpek Instiute, Serbia***Thermal analysis of strawberry preservation by cooling and freezing (AFT354) Pp1899**

A.-G. Ghiaus, C. Vasilescu

*Technical University of Civil Engineering, Romania***Effects on Xe hydrate formation for texture in vegetable tissue (AFT640) Pp1901**H. Ando^a, T. Suzuki^b, K. Kajiwara^a, Y. Kawagoe^c, Y. Makino^c, S. Oshita^c^a*School of Bioscience and Biotechnology, Tokyo university of Technology, Japan*, ^b*Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan*, ^c*Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan***The potential of ambient cooling systems for reducing refrigeration loads and saving energy (AFT651) Pp1903**

S.J. James, C. James

*Food Refrigeration and Process Engineering Research Centre (FRPERC), The Grimsby Institute of Further & Higher Education (GIFHE), UK****Pp: Page number in Printed Proceedings**

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A.M. Stevik, I.C. Claussen

YSINTEF Energy research, Norway

Modeling and control of food processes

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A. Abakarov

Universidad Politécnica de Madrid, Spain

A multi-criteria decision making approach for food engineering (MCF15) Pp1525

A. Abakarov

Universidad Politécnica de Madrid, Spain

Dynamic analysis of the heating process for liquid egg products and tuning controller (MCF88) Pp1527

P. de Souza Castro, P. Akemi Makiyama, V. Silveira Jr

Faculty of Food Engineering, State University of Campinas, Brazil

The complex system science for optimal strategy of management of a food system: the camembert cheese ripening (MCF136) Pp1529

N. Perrot^{a,b}, S. Mesmoudi^b, R. Reuillon^b, E. Lutton^c, I. Alvarez^d

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Model identification of the ice-cream crystallization process (MCF163) Pp1531

C. Vilas^a, E. Balsa-Canto^a, M. Arellano^b, H. Benkhelifa^b, G. Alvarez^b, D. Flickb, D. Leducq^b, A. Alonso^a

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Design and construction of a batch oven for investigation of industrial continuous baking processes (MCF345) Pp1533

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Enhancing the energy efficiency of pulsed electric field induced microbial inactivation by multiphysics modelling (MCF408) Pp1535

K. Knoerzer, R. Buckow

CSIRO Food and Nutritional Sciences, Australia

Derivation of postharvest fruit behavior reduced order models for online monitoring and control of quality parameters during refrigeration (MCF451) Pp1537

D. Rivas^a, C. Vilas^a, A. Alonso^a, F. Varas^b

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Improvements of air flow distribution in a freezing tunnel using Airpak (MCF475) Pp1539

M. Justo Alonso^a, T. Andresen^a, F. Frydenlund^a, K. Norne Widell^b

^aSINTEF Energy research, Norway, ^bNorwegian University of Science and Technology, Norway

Influence of changes in pH during milk coagulation process on ultrasonic phase velocities of milk (MCF566) Pp1541

T. Nishizu, E. Isaji, K. Takatsu, S. Okabe, M. Kawabata, K. Goto

Food Process Engineering Lab., Gifu University, Japan

Numerical estimation of the effective moisture diffusivity during microwave heating of food (MCF705) Pp1545

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ONIRIS/CNRS/GEPEA, LUNAM Université, France

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P. Raspor^a, L. Baša^a, M.A.V. Axelos^b

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Modeling of transport phenomena -I-, -II-

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Two dimensional modeling of heat and momentum transfer in thermal processing of liquid containing horizontal cans (MCF30) Pp1485

Z. Boz, F. Erdogdu

Department of Food Engineering, University of Mersin, Turkey

Kinetics and modeling of star fruit (*Averrhoa carambola*, L.) drying in a tray dryer (MCF82) Pp1487

C.T. Santos^a, R.C. F. Bonomo^b, M.A. Chaves^b, R.C.I. Fontan^b, P. Bonomo^b

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A hybrid CST/Neural network model for moisture prediction in milk powder during drying in a spouted bed (MCF157) Pp1489

A.B. da Silva^a, A.R.F. de Almeida^b, F.B. Freire^a, J.T. Freire^a

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Numerical simulation of transient conjugate mixed convection with non Newtonian liquid food solidification for various inlet/outlet configurations (MCF192) Pp1491

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Modelling the heat treatment of a starch suspension inside a tubular exchanger: The influence of food product transformation on residence time distributions (MCF232) Pp1495

S. Plana-Fattori, E. Chantoiseau, C. Doursat, D. Flick

AgroParisTech, UMR1145 Ingénierie Procédés Aliments, Massy, France INRA, UMR1145 Ingénierie Procédés Aliments, F-91300 Massy, France

Modelling effect of ultrasound pretreatment on drying kinetics of kiwifruit (MCF274) Pp1497

S. Beiraghi Toosi^a, Y. Maghsoudlou^b, B. Bolouri^a, E. Eshraghi^b

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Use of mathematical modeling to simulate drying kinetics of kiwi fruit (MCF275) Pp1499

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Predicting the solubilization preference of natural phenols to different solvents (MCF463) Pp1501

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Modelling the kinetics of convective drying of prunes (MCF572) Pp1503

H.T. Sabarez

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Transport in deformable food materials: a poromechanics approach (MCF617) Pp1507

F. Dhall, A.K. Datta

Biological and Environmental Engineering, Cornell University, USA

Kinetic modeling of mass transfer during deep fat frying of shrimp nuggets coated with different batter formulation (MCF627) Pp1509

F. Dehghan Nasiri, M. Mohebbi, F. Tabatabaee Yazdi, M.H. Haddad Khodaparast

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S. Mack, M.A. Hussein, T. Becker

*Technische Universität München, Germany***Modelling of transport processes during osmo-dehydro-freezing (MCF961) Pp1517**

A.M. Goula, H.N. Lazarides

*Department of Food Science and Technology, Aristotle University of Thessaloniki, Greece***Use of simulator to predict the behaviour of separation step on supercritical fluid extraction process (MCF1067) Pp1519**

J.M. Prado, M.A.A. Meireles

*LASEFI/DEA/FEA, University of Campinas, Brazil***Phenomenological characterization of chilling of pork carcasses (MCF1119) Pp1521**A. Jaques^a, S. Almonacid^{a,b}, R. Simpson^{a,b}, D. Jaques^a, F. Lacenlotti^a, M. Pinto^a^aUniversidad Técnica Federico Santa María, Chile, ^bCentro Regional para el Estudio de Alimentos Saludables, Chile**Food waste engineering****P-FEW 1****Pretreatment and hydrolysis of cellulosic agricultural wastes with a cellulase-producing Streptomyces for bioethanol production (FEW38) Pp1565**C.-L. Hsu^a, K.-S. Chang^b, Y.-H. Chang^b, H.-D. Jang^b^aDepartment of Food Science, Tunghai University, Taiwan, ^bDepartment of Food Science, Yuanpei University, Taiwan**Effect of carbon source and high C/N ratio in the cellulosic hydrolysate-based media on the crude lipid contents and unsaturated fatty acid compositions of yeasts (FEW39) Pp1567**Y.-H. Chang^a, K.-S. Chang^a, H.-D. Jang^a, C.-L. Hsu^aDepartment of Food Science, Yuanpei University, Taiwan, ^bDepartment of Food Science, Tunghai University, Taiwan**Statistical models discrimination for thin-layer drying of industry citrus by-products (FEW201) Pp1569**

H. Perazzini, F.B. Freire, J.T. Freire

*Chemical Engineering Department, Federal University of São Carlos, Brazil***Mass transfer analysis of citrus industry by-products during drying in a fixed bed (FEW213) Pp1571**

H. Perazzini, M.T. Bitti, F.B. Freire, J.T. Freire

*Drying Center, Chemical Engineering Department, Federal University of São Carlos, Brazil***Optimization of lipids enzymatic hydrolysis present in swine slaughterhouse effluents (FEW253) Pp1573**

A. Pinto Kempka

*Food Engineering Department, Santa Catarina State University, Brazil***Extraction and characterization of pectins from agricultural byproducts; conventional chemical versus eco-friendly physical/enzymatic treatments (FEW266) Pp1575**J. Lim^a, B. Min^a, Y.J. Kim^a, S. Ko^a, C.G. Kang^b, S. Lee^a^aDepartment of Food Science and Technology, Sejong University, Republic of Korea, ^bResearch Center, Ottogi corporation, Republic of Korea**New prospects for high quality ingredients obtained from citrus fruit peel (FEW478) Pp1577**

G. Cortellino, S. Gobbi, D. Torreggiani

*Research Unit of Food Technology, Council of Agricultural Research, Italy***Production and utilization of food additives from olive mill wastewater (FEW479) Pp1579**E. Tornberg^b, C.M. Galanakis^a, C. Barbier^b^aDepartment of Environmental Engineering, Technical University of Crete, Greece, ^bDepartment of Food Technology, Lund University, Sweden**Removal of phenolic compounds from olive mill wastewater by adsorbent resins (FEW708) Pp1581**T. Kocadağlı^a, B. Ataç Mogol^a, V. Gökmen^{a,b}^aDepartment of Food Engineering, ^bFood Research Center, Hacettepe University, Ankara, Turkey**Proposal for use of pseudostem from banana tree (*Musa cavendish*) (FEW893) Pp1583**

D.G. Feriotti, A.M. Iguti

*Maua Institute of Technology, Brazil****Pp: Page number in Printed Proceeding**

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Process optimization for recovery of carotenoids from tomato waste (FEW987) Pp1585

I.F.Strati, V. Oreopoulou

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Soluble dietary fiber generation from apple pomace (FEW1013) Pp1587

M.D. Bibbins-Martínez, B. Enciso-Chávez, S.B. Nava Galicia, D. Castillo Hernández

CIBA-IPN, México

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Innovation management

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Monitoring of acrylamide content in wafers and biscuits and mitigation strategies in diabetic products (INM343) Pp1591

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"Education for Employment" in Tanzania (INM358) Pp1593

D.G. Mercer^a, P.A. Remillard^b, P.A. Goodman^b

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Environmental and food safety management systems, according to ISO 14001 and ISO 22000 in fish processing plants: experiences, critical factors and possible future strategies. (INM553) Pp1595

A.J. Weyandt^a, S.R. Reis da Costa^b, M. Leonor Nunes^c, A. Gaspar^d

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Emerging technologies -I-

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Mass transfer of fruit slices in hypertonic solution (NFP93) Pp1609

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Nanofiltration treatment of waste brine obtained from sugar decolorizing resin regeneration (NFP109) Pp1611

F. Salehi, S.M.A. Razavi

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S. Chaiwanichsiri, N. Poonnakasem, K. Laohasongkram

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Decontamination of spices by using a pulsed light treatment (NFP246) Pp1615

M. Moreau^a, I. Nicorescu^a, B. Nguyen, A.S. Turpin^a, A. Agoulon^b, S. Chevalier^a, N. Orange^a

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Acceleration of precipitation formation in peach juice induced by high-pressure carbon dioxide (NFP264) Pp1617

L. Zhou, Y. Zhang, X. Liaor, X. Hu

College of Food Science and Nutritional Engineering, China Agricultural University, China

Effect of the electric field on the vitamins A, C and E alone and added to avocado paste (NFP331) Pp1619

R.R.R. de la Torre, M.G.M. Ramos, M.R.R. López, J.A.A. Ortega, F.J.M. Montes

Centro de Investigación en Biotecnología Aplicada-IPN, México

Effect of vacuum impregnation treatments to improve quality and texture of Zucchini (*Cucurbita pepo*, L.) (NFP497) Pp1621

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WEDNESDAY, MAY 25th - POSTER SESSION 4**08:30-13:00****Qualitative characteristics of sugar beet juices obtained in pilot extractor with pulsed electric field (PEF) pre-treatment (NFP535) Pp1623**K. Loginova^{a,b}, E. Vorobiev^a, N. Lebovka^b^a*Département de Génie Chimique, Université de Technologie de Compiègne, Centre de Recherche de Royallieu, France*, ^b*Institute of Biocolloidal Chemistry named after F. D. Ovcharenko, NAS of Ukraine, Ukraine***Modelling microbial load reduction in foods due to ozone impact (NFP657) Pp1625**

E.M.C. Alexandre, T.R.S. Brandão, C.L.M. Silva

*Centro de Biotecnologia e Química Fina - Escola Superior de Biotecnologia - Universidade Católica Portuguesa, Portugal***Use of organic acids on their own and in combination for decontamination of fresh vegetables and herbs as an alternative to chlorine (NFP696) Pp1627**

S. Bulut, E. Ograsici

*Trakya University, Food Engineering Department, Turkey***Use of a Weibullian model to characterize microbial inactivation in apple juice processed with ultraviolet light (NFP714) Pp1629**E. Mytilinaki^a, S. Guerrero^{a,b}, S.M. Alzamora^{a,b}^a*Departamento de Industrias, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina*, ^b*Member of Consejo Nacional de Investigaciones Científicas y Técnicas de la República Argentina***Detection of pork freshness using NIR hyperspectral imaging (NFP715) Pp1631**D.F. Barbin^a, G. ElMasry^a, D.-W. Sun^a, P. Allen^b^a*Food Refrigeration and Computerised Food Technology (FRCFT), School of Agriculture, Food Science and Veterinary Medicine, University College Dublin, Ireland*, ^b*Ashtown Food Research Centre, Teagasc, Ireland***Impact of non-thermal atmospheric pressure plasma on quality relevant food ingredients (NFP758) Pp1633**B. Surowsky^a, F. Züllicke^a, O. Schlüter^b, D. Knorr^a^a*Berlin University of Technology, Department of Food Biotechnology and Food Process Engineering, Germany*, ^b*Leibniz-Institute for Agricultural Engineering Potsdam-Bornim, Germany***Effect of pulsed light and ascorbic acid/CaCl₂ dipping on rheological properties of fresh-cut apples (NFP770) Pp1635**P.L. Gómez^{a,c}, D.M. Salvatori^{b,c}, S.M. Alzamora^{a,c}^a*Departamento de Industrias, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina*, ^b*Facultad de Ingeniería, Universidad Nacional del Comahue, Argentina*, ^c*ONICET, Argentina***Modeling a pasteurization process of clarified apple juice based on pulsed ultraviolet light (NFP830) Pp1637**I. Kasahara^a, P. Grogg^a, L. Aguilar^b^a*Escuela de Alimentos, Universidad Católica de Valparaíso, Chile*, ^b*Laboratorio de Fotofísica y Espectroscopía Molecular, Universidad Católica de Valparaíso, Chile***Encapsulation of *Lactobacillus paracasei* using spray gun technology (NFP876) Pp1639**M. Jiménez^a, E. Jiménez^a, E. Azuara^a, G. Luna^b, C.I. Beristain^a^a*Instituto de Ciencias Básicas, Universidad Veracruzana Xalapa, México*, ^b*DEPI, Instituto Tecnológico de Orizaba, México***Concentration of a vegetal enzymatic extract by microfiltration (NFP891) Pp1641**A.S.C. Teles^a, S.C. Terzi^b, L.F.M. Silva^b, F.S. Gomes^b, I.V.M. Moraes^c, A.S. Egito^d, L.M.C. Cabral^b, V.M. Matta^b^a*Central State University of West Zone, Brazil*, ^b*Embrapa Food Technology, Brazil*, ^c*Embrapa Tropical Agroindustry, Brazil*, ^d*Embrapa Goats and Sheep, Brazil***Fresh produce decontamination by an atmospheric pressure plasma-jet (NFP927) Pp1643**M. Baier^a, M. Görgen^a, A. Fröhling^a, M. Geyer^a, W.B. Herppich^a, J. Ehlbeck^b, D. Knorr^c, O. Schlüter^a^a*Leibniz-Institute for Agricultural Engineering, Germany*, ^b*Leibniz-Institute for Plasma Science and Technology, Germany*, ^c*Technische Universität Berlin, Germany****Pp: Page number in Printed Proceedings**

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Intensification of process of water-thermal treatment of wheat grain before bread flour milling (NFP935) Pp1645

O. Safonova^a, O. Razborskaya^a, V. Yuferov^b, O. Ozerov^b

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The effect of abiotic stress pre-treatments on quality attributes of fresh-cut carrot cv. Nantes (NFP996) Pp1647

C. Alegria^{a,c}, J. Pinheiro^a, M. Duthoit^a, E.M. Gonçalves^a, M.T. Coelho^b, M. Moldão-Martins^c, M. Abreu^a

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Yogurt from ultrasound treated milk: monitoring of fermentation process and evaluation of product quality characteristics (NFP1062) Pp1649

P. Sfakianakis, C. Tzia

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Effect of sonication on malting behaviour of barley (NFP1143) Pp1651

E. Duthoit^a, B. Tiwari^b, M. Gupta^c, P.J. Cullen^d, C. Brennan^b, C. O'Donnell^a

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Effects of high intensity pulsed electric fields or thermal treatments on carotenoid profile of a fruit juice-soymilk beverage along chilled storage (NFP1300) Pp2217

L. Salvia-Trujillo, M. Morales-de la Peña, Ma. A. Rojas-Graü, O. Martín-Belloso

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Amino acid composition of a fruit juice-soymilk beverage as affected by high intensity pulsed electric fields or thermal treatments during storage (NFP1301) Pp2219

M. Morales-de la Peña^a, L. Salvia-Trujillo^a, T. Garde-Cerdán^b, Ma. A. Rojas-Graü^a, O. Martín-Belloso^a

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Food rheology**P-FMS 9****Microscopy and texture of raw and cooked cassava (*Manihot esculenta* Crantz) roots (FMS19) Pp1085**

H. Aparecida Maieves^a, D. Cardoso De Oliveira^a, C. Bernardo^b, C.M. De Oliveira Müller^a, E.R. Amante^b
^aChemistry and Food Engineering Department, Federal University of Santa Catarina, Florianópolis, Brazil, ^bFood Science and Technology Department, Federal University of Santa Catarina, Brazil

Brama australis gel obtention and rheological characterization (FMS391) Pp1087

F. Osorio, J. Crisostomo, S. Baeza, S. Matiacevich, J. Enrione, O. Skurtys, R. Bustos
 Dpto. Ciencia y Tecnología Alimentos, Facultad Tecnológica, Universidad de Santiago de Chile-USACH, Chile

Correlation between rheological properties and pectin fractions content of tomato juice during concentration to paste (cold-break process) (FMS395) Pp1089

K. Youssef, A. Shatta, A. Al-Sanabani, S. El-Samahy
 Faculty of Agriculture, Suez Canal University, Egypt

Rheological behavior and some quality parameters of date ice cream (FMS397) Pp1091

K. Youssef, T. Moussa-Ayoub, S. El-Samahy
 Faculty of Agriculture, Suez Canal University, Egypt

The time dependent rheological characteristics of low-calorie pistachio butter: A response surface methodology (FMS528) Pp1093

B. Emadzadeh^a, S.M.A. Razavi^b, M. Nassiri Mahallati^c, R. Farhoosh^b
^aKhorasan Research Institute for Food Science and Technology (KRIFST), Iran, ^bDepartment of Food Science and Technology, Ferdowsi University of Mashhad (FUM), Iran, ^cDepartment of Agronomy, Ferdowsi University of Mashhad (FUM), Iran

Rheological effects of some xylanase on doughs from high and low extraction flours (FMS537) Pp1095

M. Ognean^a, C.F. Ognean^a, A. Bucur^b
^a"Lucian Blaga" University from Sibiu, The Faculty of Agricultural Sciences, Food Industry and Environmental Protection, Romania, ^b"Lucian Blaga" University from Sibiu, The Faculty of Sciences, Romania

Regological behavior of pitanga roxa (*Eugenia uniflora*) pulp (FMS547) Pp1097

M.A. Chaves^a, I.M.A.Barreto^a, C.T. Santos^b, C.M. Veloso^a
^aUniversidade Estadual do Sudoeste da Bahia (UESB), Brazil, ^bInstituto Federal Bahiano, Senhor do Bonfim, Brazil

Cluster analysis of rice starch varieties based on processability (FMS622) Pp1099

I. Lee, K. Jin We, J. Jung, S.-W. Kim, S. Ko
 Sejong University, Department of Food Science and Technology, Republic of Korea

Stability and rheological properties of fat-reduced mayonnaises by using sodium octenyl succinate starch as fat replacer (FMS643) Pp1101

S. Thaiudom
 School of Food Technology, Institute of Agricultural Technology, Suranaree University of Technology, Thailand

Rheological properties of a soy protein isolate and concentrate: effect of gel strength (FMS783) Pp1103

T. Varzakas^a, A. Labropoulos^a, S. Anestis^b
^aTechnological Institute of Kalamata, Hellas, ^bTechnological Institute of Athens, Hellas

Steady and oscillatory shear behaviour of semi-concentrated starch suspensions (FMS866) Pp1105

M. Mironescu^a, I.D. Mironescu^b, L. Oprean^a
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The effect of whey protein concentrate as a fat replacer on the rheological characteristics of yogurt (FMS904) Pp1107

J.T. Faria, M.C.T.R. Vidigal, M.M.R. Loures, L.A. Minim, V.P.R. Minim
 Department of Food Technology, Federal University of Viçosa, Brazil

Rheological properties of wheat flour substitutes/alternative crops assessed by Mixolab (FMS910) Pp1109

T. Dapčević Hadnađev, A. Torbica, M. Hadnađev
 Institute for Food Technology, Serbia

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WEDNESDAY, MAY 25th - POSTER SESSION 5

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S.C. Vázquez Solorio, D. Deyanira Vega Méndez, M.G. Sosa Herrera, L.P. Martínez Padilla
Universidad Nacional Autónoma de México, Facultad de Estudios Superiores Cuautitlán, Departamento Ingeniería y Tecnología, Laboratorio de Propiedades Reológicas y Funcionales en Alimentos, México

Changing of texture and pectin content of Hungarian bred apple genotypes during the storage (FMS1225) Pp1115

G. Ficzek^a, M. Stéger-Máté^b, B. Nótin^b, M. Tóth^a
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Nutritional profiling of wheat germ oil for the value added baked products; Correlation with lipid profile management (FMS1278) Pp1117

M.U. Arshad^a, F.M. Anjum^b, A. Arshad^c
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Food product development

P-FPE 4

Antioxidant dyes and pigment extraction using a home-made pressurized solvent extraction system (FPE24) Pp2113

D.T. Santos, C.L.C. Albuquerque, M.A.A. Meireles
LASEFI/DEA/FEA (School of Food Engineering)/UNICAMP (University of Campinas), Brazil

Comparative study of the physicochemical characteristics of an economic Buffalo (*Bubalus bubalis*) meat product and an economic beef (*Bos indicus*) meat product with incorporation of bovine hemoglobin in powder in both formulations (FPE50) Pp2115

J.F. Rey, C.L. Martínez, A. Urre
Ingeniería de Alimentos, Universidad de la Salle, Colombia

Production of Turkish delight (lokum) with its additives and quality (FPE52) Pp2117

A. Batu
Food Engineering Department, Tunceli University, Turkey

Effect of fermented okara (bean curd lees) intake on TNCB (2,4,6-trinitrochlorobenzene)-induced chronic dermatitis in NC/Nga mice (FPE261) Pp2119

T. Enomoto^a, M. Nishi^a, F. Barla^a, N. Murata^a, H. Matsui^b, H. Kumagai^b, H. Take^c, T. Michihata^c, S. Nakamura^c, M. Kawashima^d, E. Fujihara^d
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Development of a dehydrated and laminated probiotic product with *B. infantis* and *L. acidophilus* using goat sweet whey (FPE267) Pp2121

G. Trujillo de Santiago, C. Sáenz Collins, C. Rojas de Gante
Tecnológico de Monterrey, México

Lentil-based snacks: structural and textural evaluation (EPF361) Pp2123

A. Lazou^a, M. Krokida^a, N. Zogzas^b, V. Karathanos^c
^a*School of Chemical Engineering, National Technical University of Athens, Greece,* ^b*Department of Food Technology, Technological Educational Institute of Athens, Greece,* ^c*Department of Nutrition, Harokopio University, Greece*

The study on SFLAB GanedenBC30 viability on baking products during storage (FPE383) Pp2125

C.-L. Jao^a, S.-L. Huang^b, S.-C. Wu^a, Hsu Kuo-Chiang^c
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Formulation and characterization of biocompatible microemulsions as nutraceuticals (FPE437) Pp2127

A. Xenakis, V. Papadimitriou, T.G. Sotiroudis
National Hellenic Research Foundation, Institute Of Biological Research and Biotechnology, Greece

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Processing and technological characterization of extruded breakfast cereal obtained with a mix of broken rice and common bean flour (FPE485) Pp2129

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Cereal bar development using exotic fruit (FPE529) Pp2131

Á.S. Lima^{a,b}, E. Rabelo Torres^a, E. Santana Castro^a, R. Felix de Santana^b, J. Cordeiro Cardoso^{a,b}, C.M. Faria Soares^{a,b}

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Substitution of ingredients by green coconut (*Cocos nucifera* L.) pulp in ice cream formulation (FPE573) Pp2133

A.M. Iguti, A.C.I. Pereira, L. Fabiano, R.A.F. Silva, E.P. Ribiero

Mauá Institute of Technology, Sao Caetano do Sul, Brazil

Evaluation of drying green coconut pulp for obtaining a snack-like product (FPE585) Pp2135

W.H. Prieto, E.A.G. Seravalli, A.M. Iguti, M. Nitz

Mauá Institute of Technology, São Caetano do Sul, Brazil

Physical-chemistry and microbiological analysis of probiotic dairy beverage fermented with kefir (FPE587) Pp2137

L.R. Ito Morioka^a, M. de Fátima Fonseca^a, L. Avallone Bueno^b, D. Marques^a, G. Cruz Ximenes^c, C. Souza^a, M. Antônio de Morais Jr^c

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Phytochemicals and antioxidant activity of comminuted orange (*Citrus sinensis* L.) (FPE599) Pp2139

Z. Escobedo-Avellaneda, V. Serment-Moreno, A. Valdez-Fragoso, H. Mujica-Paz, J. Welti-Chanes

Department of Biotechnology and Food Engineering, ITESM, Mexico

Possibility of using durum wheat flour as an improvement agent in bread making process (FPE778) Pp2141

A. Torbica, M. Hadnađev, T. Dapčević Hadnađev

Institute for Food Technology, University of Novi Sad, Serbia

Sensory and antioxidant properties of beer with *Juniperus communis* L. (FPE851) Pp2143

M. Veljovic, S. Despotovic, R. Djordjevic, S. Pecic, A. Kalusevic, I. Leskosek-Cukalovic, V. Nedovic

Faculty of Agriculture-University of Belgrade, Serbia

Influence of phytosterols addition in the rheology and sensory attributes of dark chocolate (FPE861) Pp2145

P. Efraim^a, G.C. Marson^a, D.C.P. Jardim^b, A.O. Garcia^b, K. Yotsuynagi^b

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Addressing new functional fillo products through nutrition and healthy ingredients: Hi omega-3 fatty acids and phytosterol esters (FPE993) Pp2147

T. Varzakas, A. Labropoulos, S. Anestis

Technological Institute of Kalamata, Greece

The non-starch polysaccharides quantity changes in pastry products where Jerusalem artichoke (*Helianthus tuberosus* L.) added (FPE1052) Pp2149

I. Gedrovica^a, D. Karklina^a, A. Frasz^b, O. Jablonka^b, D. Boros^b

^aFaculty of Food Technology, Latvia University of Agriculture, Latvia, ^bLaboratory of Quality Evaluation of Plant Materials, Institute of Plant Breeding and Acclimatization, Poland

Characterization of cookies formulated with rice and black bean extruded flours (FPE1012) Pp2151

P.Z. Bassinello^a, D.De G.C. Freitas^b, J.L.R. Ascheri^b, C.Y. Takeiti^b, R.N. Carvalho^a, S.N. Koakuzu^a, A.V. Carvalho^c

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WEDNESDAY, MAY 25th - POSTER SESSION 5**14:00-18:30****Isolation of lactic acid bacteria in Marajoara cheese, Amazon, Brazil (FPE1122) Pp2153**

H. Mendes de Figueiredo, C. Gonçalves e Gonçalves, P.C. de Moura Guimarães, A. Mendes de Figueiredo Júnior

*Belém, Brasil***The physico-chemical and microbiological aspects in ice-cream of buffalo milk added for fiber food (FPE1117) Pp2155**G.C.B. Chinelate^a, D.F. Pontes^b, R.R. de A. Bezerra^a^aUFMG, Pombal, Brazil, ^bUFC, Brazil**Process optimisation of egg replacer in sponge cake baking (FPE1146) Pp2157**L. Mai^a, T. Norton^b, W. Li^a, B. Tiwari^a, C. Brennan^a^aDepartment of Food, Manchester Metropolitan University, UK, ^bDepartment of Engineering, Harper-Adams University College, UK**Obtaining functional fermented beverages by using the kefir grains (FPE1257) Pp2159**

T. Balabanova, P. Panayotov

*Department "Technology of milk and dairy products", University of food technology, Bulgaria***Effect of synthesis conditions of short-chain fructooligosaccharides to obtain high yield and volumetric productivity (FPE1258) Pp2161**R. Vega^a, M.E. Zúñiga-Hansen^b^aSchool of Biochemical Engineering, Pontificia Universidad Católica de Valparaíso, Chile ^bRegional Centre for the Study of Healthy Foods (CREAS), Chile**Effect of pH culture on growth and fatty acid profile of Lactobacillus plantarum bacteria (FPE1284) Pp2163**

C. Soto

*Centro Regional de Estudios en Alimentos Saludables, Valparaíso, Chile***Engineering of delivery systems of bioactive foods****P-FPE 5****Quality decay and viability of Lactobacillus acidophilus free and encapsulated in buffalo milk yogurt (FPE193) Pp2165**A.S. Shoji^a, A.C. Oliveira^b, M.A. Trindade^a, O. Freitas^b, M. Thomazini^a, R.J.B. Heinemann^a, C.S. Favaro-Trindade^a^aFaculdade de Zootecnia e Engenharia de Alimentos, Universidade de São Paulo, Brazil, ^bFaculdade de Ciências Farmacêuticas de Ribeirão Preto, Universidade de São Paulo, Brazil**Supercritical fluid extraction with modifier of antioxidant compounds from jabuticaba (Myrciaria cauliflora) by-product: economic viability (FPE570) Pp2167**

R.N. Cavalcanti, P.C. Veggj, M.A.A. Meireles

*School of Food Engineering, UNICAMP, Brazil***Microencapsulation of sachu inchi (Plukenetia volubilis L.) oil with zein (FPE610) Pp2169**S. Quispe-Condori^{a,b}, M.D.A. Saldaña^b^aSchool of Food Engineering, Universidad Peruana Unión, Perú, ^bDepartment of Agricultural, Food and Nutritional Science, University of Alberta, Canada**Encapsulation of curcumin loaded oil droplets by cryotropic gel formation from o/w emulsion (FPE820) Pp2171**K. Nakagawa^a, N. Sowsod^b, T. Charinpanitkul^c, A. Soottitantawat^c, W. Tanthapanichakoon^c^aResearch Centre for Nano-Micro Science and Engineering, University of Hyogo, Japan, ^bNanoscience and Technology Program, Graduate School, Chulalongkorn University, Thailand, ^cCenter of Excellence in Particle Technology, Faculty of Engineering, Chulalongkorn University, Thailand**Effect of different ratios of maltodextrin/gelatin and ultrasound in the microencapsulation efficiency of turmeric oleoresin (FPE915) Pp2173**

C.R. Malacrida, V.R. Nicoletti Telis

*São Paulo State University, UNESP, Brazil****Pp: Page number in Printed Proceedings**

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Encapsulation of *Melissa Officinalis* leaf's active compounds in β -cyclodextrin and modified starch (FPE1010) Pp2175

I. Mourtzinou^a, S.E. Papadakis^b, P. Igoumenidis^c, V.T. Karathanos^c

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Deployment of response surface methodology to optimize recovery of grape (*Vitis vinifera*) stem and seed polyphenols (FPE1076) Pp2177

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Production of 1-octen-3-ol by *Neurospora* species isolated from beiju in different culture medium (FPE1170) Pp2179

D.S. de Carvalho^a, A.P. Dionísio^a, R. dos Santos^a, S. Boguz Jr^b, H.T. Godoy^b, G.M. Pastore^a

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Food product engineering and functional foods

P-FPE 6

Characterisation of a non-alcoholic beverage made of residues from king palm (*Archontophoenix alexandrae*) industry (FPE18) Pp2181

K. Cardoso Tramonte, J.G. Provesi, I. Moreira Dutra Albuquerque E Silva, Aureanna Nairne Negrão Murakami, M. Maraschin, R. Dias De Mello Castanho Amboni, E.R. Amante

Department of Food Science and Technology, Federal University of Santa Catarina, Brazil

Composition of aroma compounds in fermented apple juice: effect of apple variety, fermentation temperature and inoculated yeast concentration (FPE339) Pp2183

R. Riekstina-Dolge^a, Z. Kruma^a, D. Karklina^a, D. Seglina^b

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Mode of inhibition of α -glucosidase and α -amylase by polyphenol-enriched extracts of maqui (*Aristotelia chilensis*) (FPE367) Pp2185

F. Acevedo^a, M. Rubilar^{a,b}, B. Palma^a, C. Shene^{a,b}

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Influence of pH variation during propolis extraction with the use of water as solvent (FPE385) Pp2187

B.C.B.S.Mello, P.M. Kakuda, M.D. Hubinger

Department of Food Engineering, Faculty of Food Engineering, University of Campinas, Brazil

Modifier effects on supercritical fluid extraction (SFE) of some Brazilian plants: Antioxidant activity and economical evaluation (FPE522) Pp2189

P.C. Veggi, R.N. Cavalcanti, M.A.A. Meireles

LASEFI/DEA/FEA (School of Food Engineering), UNICAMP (University of Campinas), Brazil

Anthocyanin extraction from jaboticaba (*Myrciaria cauliflora*) skins by different techniques: Economical evaluation (FPE524) Pp2191

P.C. Veggi, D.T. Santos, M.A.A. Meireles

LASEFI/DEA/FEA (School of Food Engineering), UNICAMP (University of Campinas), Brazil

Study of cleaning efficiency of organic microfiltration membranes by attenuated total reflectance infrared microspectroscopy (FPE660) Pp2193

T.K. Gelaw, A. Trentin, C. Güell, M. Ferrando, S. de Lamo-Castellví

Departament d'Enginyeria Química, Universitat Rovira i Virgili, Avinguda, Spain

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WEDNESDAY, MAY 25th - POSTER SESSION 5**14:00-18:30****Comparative study on quality evaluation of buffalo meat slices incorporated with finger millet, oats and chickpea (FPE716) Pp2195**

M. Siddiqui, M.A. Khan

*Aligarh Muslim University, India***Microencapsulation of tocopherols in lipid matrix by spray chilling method (FPE815) Pp2197**

O. Diaz Gamboa, A. Lireny Guaraldo Gonçalves, R.C. Grosso

*Faculty of Food Engineering, University of Campinas, Brazil***Amino acid profile of Sous vide cooked poultry breast meat products (FPE843) Pp2199**K. Ramane^a, R. Galoburda^a, V. Kreicbergs^a, I. Vanaga^b^a*Faculty of Food Technology, Latvia University of Agriculture, Latvia*, ^b*Research Institute of Biotechnology and Veterinary Medicine "Sigra", Latvia University of Agriculture, Latvia***Antioxidant activity and porphyrin content in hydrothermal extracts of *Porphyra Yezoensis* (Susabinori) (FPE907) Pp2201**C. Goto^a, S. Machmudah^b, M. Sasaki^a, M. Goto^b, K. Okai^c, Y. Okai^d, S. Kondo^e^a*Graduate School of Science and Technology, Kumamoto University, Japan*, ^b*Bioelectrics Research Center, Kumamoto University, Japan*, ^c*Department of Food and Nutritional Environment, Kinjo Gakuin University, Japan*, ^d*Department of Human Life Science, Osaka Kun-Ei Women's College, Japan***Effect of frozen storage on the quality of camu camu (*Myrciaria dubia* (H. B.K.) McVaugh,) pulp (FPE1172) Pp2203**A.L.R. Souza^a, M.M Pagani^b, F.S. Gomes^b, L.M.C. Cabral^b^a*Department of Food Science and Technology/ UFRRJ, Brazil*, ^b*Embrapa Food Technology, Brazil***Effect of semolina particle size on the cooking kinetics and quality of spaghetti (FPE1207) Pp2205**G. Sacchetti^a, G. Cocco^b, D. Cocco^b, L. Neri^a, D. Mastrocola^a^a*Department of Food Science, University of Teramo, Italy*, ^b*Pastificio Cav. Giuseppe Cocco, Fara S. Martino, Italy***Kinetics of heterogeneous amylolysis in oat flour and characterization of hydrolyzates (FPE1223) Pp2207**A. Patsioura^a, V. Gekas^b, A. Lazaridou^c, C. Biliaderis^c^a*Department of Environmental Engineering, Technical University of Crete, Greece*, ^b*Department of Agricultural Sciences, Biotechnology and Food Science, Cyprus University of Technology, Cyprus*, ^c*Department of Food Science and Technology, School of Agriculture, Aristotle University, Greece***Kinetics of *Amycolatopsis mediterranei* DSM 43304 lipase-mediated synthesis of isoamyl acetate in n-hexane (NFP320) Pp2209**

D.S. Dheeman, J.M. Frías, G.T.M. Henehan

*School of Food Science & Environmental Health, Dublin Institute of Technology, Ireland***PROBIOLIVES: Table olive fermentation with selected strains of probiotic lactic acid bacteria. Towards a new functional food (FP7-SME-2008- 2 project) (FMS1328) Pp2211**C.C. Tassou^a, E.Z. Panagou^b, A. Garrido- Fernandez^c, C. Peres^d, L. Cocolin^e, N. Chammem^f^a*National Agricultural Research Foundation, Institute of Technology of Agricultural Products, Greece*, ^b*Agricultural University of Athens, Dept. of Food Science & Technology, Lab. Of Microbiology & Biotechnology of Foods, Greece*, ^c*Instituto de la Grasa, Consejo Superior de Investigaciones Científica, Spain*, ^d*Instituto Nacional dos Recursos Biológico, Portugal*, ^e*University of Turin, Faculty of Agriculture, Sector of Microbiology and Food Science, Italy*, ^f*L'Institut National des Sciences Appliquées et de Technologie, Tunisia***Effect of vacuum drying on blackcurrant's antioxidant components (FPE1289) Pp2213**

M. Stéger-Máté, B. Nótin, R. Juhász, B. Verasztó, D. Jakab, J. Monspart-Sényi, J. Barta

*Corvinus University of Budapest, Faculty of Food Science, Department of Food Preservation, Hungary***Production of bioactive metabolites with pharmaceutical and nutraceutical interest by submerged fermentation of *pleurotus ostreatus* in a batch stirred tank bioreactor (FPE1307) Pp2215**L.-M. Pappaspyridi^a, N. Aligiannis^b, P. Christakopoulos^a, A.-L. Skaltsounis^b, N. Fokialakis^b^a*BIOTechMASS Unit, Biotechnology Laboratory, School of Chemical Engineering, National Technical University of Athens, Greece*, ^b*Department of Pharmacognosy and Natural Products Chemistry, Faculty of Pharmacy, University of Athens, Greece****Pp:** Page number in Printed Proceedings

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Mechanical processing of foods

P-AFT 6

Studies on the cooking conditions and mechanical koji-making of black beans (AFT34) Pp2009

C.-L. Jao^a, W.-C. Ko^b, K.-C. Hsu^c

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The use of xylanase to improve physicochemical characteristics of nixtamalized corn flour and tortilla texture obtained by extrusion (AFT540) Pp2011

B. Ramírez-Wong^b, L.C. Platt-Lucero^{a,b}, P.I. Torres-Chávez^b, J. López-Cervantes^a, D.I. Sánchez-Machado^a, E. Carvajal-Millán^c, F. Martínez-Bustos^d, A. Quintero-Ramos^e, I. Morales Rosas^b

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The design of non-contact automatic shell cutting machine of chestnut and the investigation of its effect by means of chestnut shelling experiment (AFT635) Pp2013

H.-W. Xiao^a, Z.-L. Du^b, Z. Lou^a, L.-H. Wang^a, J.-W. Bai^a, Z.-J. Gao^a

^aCollege of Engineering, China Agricultural University, China, ^bChinese Academy of Agricultural Mechanization Sciences, China

Relationship between chromatographic profiling by HS-SPME and sensory quality of mandarin juices: effect of squeeze technology (AFT1138) Pp2015

R. Alvarez Quintero^a, C. Passaro Carvalho^b, O. Lara Guzmán^a, J. Londono Londoño^a

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Modeling of quality and safety and predictive microbiology

P-MFS 2

Commercial characterization of Madalenas: Relationship between physical and sensory parameters (MFS314) Pp1785

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Integrating strain variability in modelling Salmonella enterica growth (MFS352) Pp1787

A. Lianou, K. Koutsoumanis

Food Science And Technology, Aristotle University Of Thessaloniki, Greece

A study on germination time and mycelium growth kinetics of single fungal spores (MFS353) Pp1788

M. Gougouli, K. Koutsoumanis

Food Science And Technology, Aristotle University Of Thessaloniki, Greece

Quantifying the combined effect of salt and temperature on the growth of Listeria strains isolated from salmon and salmon processing environments (MFS455) Pp1789

T. Skåra^{a,b}, A.M Cappuyns^b, E. Van Derlinden^b, J.T. Rosnes^a, V.P. Valdramidis^c, J.F.M. Van Impe^b

^aNofima, Norway, ^bKatholieke Universiteit Leuven, Department of Chemical Engineering, BioTeC - Chemical and Biochemical Process Technology and Control, Belgium, CPMF², Flemish Cluster Predictive Microbiology in Foods, ^cBiosystems Engineering UCD, School of Agriculture, Food Science and Veterinary Medicine University College Dublin, Ireland

Modelling thermosonication inactivation of Aspergillus flavus combining natural antimicrobial at different pH (MFS798) Pp1791

C.P. Coronel, M.T. Jiménez, A. López-Malo, E. Palou

Universidad de las Américas Puebla, México

Survival of Bifidobacterium longum in model solutions and fruit juices (MFS865) Pp1793

S. Nualkaekul^a, I. Salmeron^b, D. Charalampopoulos^a

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WEDNESDAY, MAY 25th - POSTER SESSION 5

14:00-18:30

Inactivation kinetics of attached *Escherichia coli* cells on stainless steel and fresh-cut apples by hydrogen peroxide disinfection treatments (MFS879) Pp1795

S. Raffellini^a, S. Ortiz^a, S.N. Guerrero^b, S.M. Alzamora^b

^aDepartment of Technology, University of Luján, Argentina, ^bNatural and Exact Sciences School, Buenos Aires University, Ciudad Universitaria, Argentina

Bi-phasic growth of *Listeria monocytogenes* Scott A in modified Welshimer's broth at 7, 10 and 14°C (MFS955) Pp1797

N.A. Tyrovouzis^a, A.S. Angelidis^b, N.G. Stoforos^c

^aAristotle University of Thessaloniki, Department of Chemical Engineering, Greece, ^bAristotle University of Thessaloniki, School of Veterinary Medicine, Greece, ^cAgricultural University of Athens, Department of Food Science and Technology, Greece

Reaction kinetics in food processing

P-MFS 3

Kinetic of white chocolate color loss (MFS124) Pp1799

D.C.P. Jardim, A.G. Orse, P. Efraim, S.C.S.R. de Moura

Instituto de Tecnologia de Alimentos (ITAL), Brazil Universidade Metodista de Piracicaba (UNIMEP), Brazil

Available lysine in powdered infant formula as described by reaction kinetics (MFS166) Pp1801

I. Schmitz^a, A. Gianfrancesco^b, U. Kulozik^a, P. Foerst^a

^aFood Process Engineering and Dairy Technology, Technische Universität München, Germany, ^bNestlé Research Center, Nestec Ltd., Switzerland

Kinetic modelling of colour changes during beef roasting (MFS214) Pp1803

S.M. Goñi^{a,b}, V.O. Salvadori^{a,b}

^aCentro de Investigación y Desarrollo en Criotecología de Alimentos (CIDCA), Fac. de Cs. Exactas, Argentina, ^bMODIAL, Área Deptal. Ing. Qca., Fac. de Ingeniería, UNLP, Argentina

Instrumentation of a semi-industrial oven to monitor non-enzymatic browning kinetics during baking (MFS428) Pp1805

M. Courel^{a,b}, B. Rega^{a,b}, S. Fehaili^{a,b}, P. Giampaoli^{a,b}, C. Bonazzi^{a,b}

^aINRA, UMR1145 Ingénierie Procédés Aliments, France, ^bAgroParisTech, UMR1145 Ingénierie Procédés Aliments, France

Degradation of 5-hydroxymethylfurfural in malt during fermentation of beer (MFS689) Pp1807

G. Akilloğlu, B. Ataç Mogol, V. Gökmen

Department of Food Engineering, Hacettepe University, Turkey

Thermal inactivation kinetics of L-carnitine (MFS969) Pp1809

P. Prokopiou^a, A.M. Goula^b, N.G. Stoforos^c

^aPipis Farm Ltd., Cyprus, ^bDepartment of Food Science and Technology, Faculty of Agriculture, Aristotle University of Thessaloniki, Greece, ^cDepartment of Food Science and Technology, Agricultural University of Athens, Greece

Quality degradation of butterhead lettuce: the performance of General Stability Index (GSI) modified methodology (MFS1009) Pp1811

M.V. Agüero, S.I. Roura

Grupo de Investigación en Ingeniería en Alimentos (GIIA), Facultad de Ingeniería, UNMDP, CONICET, Argentina

A MALST method comparison over univariate kinetic modelling for determination of shelf life in cereal snack of dried apples (MFS1018) Pp1813

J. Saavedra^{a,b}, A. Córdova^a, C. Quezada^a

^aResearch Group on Chemometrics, Department of Food Engineering, Pontificia Universidad Católica de Valparaíso, Chile ^bCentro Regional de Estudios en Alimentos Saludables (CREAS), Chile

Modulation of thermal inactivation of protease during enzymatic hydrolysis of salmon muscle (MFS1086) Pp1815

P. Valencia, N. Bustos, S. Almonacid

Universidad Técnica Federico Santa María, Chile

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Transport properties

P-EPF 5

Swelling and shrinkage regimes during the acidic marination of meat in presence of salt (EPF199) Pp1349

T. Goli^a, P. Bohuon^b, J. Ricci^a, G. Trystram^c, A. Collignan^b

^aCIRAD, UMR QualiSud, Food Process Engineering Montpellier, France, ^bMontpellier SupAgro, UMR QualiSud, Food Process Engineering Research Unit, France, ^cAgroParisTech, UMR 1145 Génial, France

Prediction of drying process of pasta based on thermogravimetric analysis (EPF217) Pp1351

T. Ogawa^{a,b}, T. Kobayashi^a, S. Adachi^a

^aDivision of Food Science and Biotechnology, Kyoto University, Japan, ^bJapan Society for the Promotion of Science

Evaluation of nutritional and structural characteristics of the dedo-de-moça pepper (*Capsicum baccatum*) during drying (EPF237) Pp1353

A.O.M. Veras, F.B. Freire, A.M. Silveira, J.T. Freire

Department of Chemical Engineering, Federal University of São Carlos, Brazil

How process operations affect cross contamination in animal feed industry (EPF243) Pp1355

M. Leloup^{a,b}, C. Sollicec^a, F. Putier^b

^aDepartment of Energetic Systems and Environment – DSEE (Ecole des Mines de Nantes-EMN), France, ^bTechnical Centre of Animal Feeding (Tecaliman), France

Study of flour and air motion during bucket elevator handling and its impact on cross-contamination in animal feed industry (EPF244) Pp1357

M. Leloup^{a,b}, C. Sollicec^a, F. Putier^b

^aDepartment of Energetic Systems and Environment - DSEE (Ecole des Mines de Nantes-EMN/GEPEA), France, ^bTechnical Center of Animal Feeding (Tecaliman), France

Effective thermal conductivity of packed-beds of grains and powders of foxtail millet (*Setaria italica* L.) (EPF287) Pp1359

A. Vasconcelos Pereira, M. do Carmo Ferreira, J. Teixeira Freire

Chemical Engineering Department, Federal University of São Carlos, Brazil

The analysis of rehydration characteristics of dried “Dedo-de-Moça” pepper kind (*Capsicum baccatum* var. *pendulum*) (EPF293) Pp1361

A.O.M. Veras, F.B. Freire, A.M. Silveira, J.T. Freire

Department of Chemical Engineering, Federal University of São Carlos, Brazil

Carotenoid partition between supercritical CO₂ and red peppers (EPF611) Pp1363

F.A. Urrego^a, J.M. del Valle^a, J.C. de la Fuente^b

^aPontificia Universidad Católica de Chile, Departamento de Ingeniería Química y Bioprocesos, Chile, ^bUniversidad Técnica Federico Santa María, Departamento de Procesos Químicos Biotecnología y Ambiente, Chile

Visualization of the mechanisms of fluids displacement during simulated frying process using glass micromodels (EPF824) Pp1365

P. Cortés^a, P. Bouchon^a, L Segura^b

^aPontificia Universidad Católica de Chile, Chile, ^bUniversidad del Bío-Bío, Chile

Characteristics of gel-coated millet dried and mass transfer in a infrared dryer (EPF1065) Pp1367

A.G.M. Pereira^a, M.M. do Prado^b, D.J.M. Sartori^a

^aDepartment of Chemical Engineering, Federal University of São Carlos, Brazil, ^bDepartment of Chemical Engineering, Federal University of Sergipe, Brazil

Modeling and simulation -I-, -II-, -III-

P-MCF 1 4 & 6

Mathematical modeling of the heat transfer process and protein denaturation during the thermal treatment of crabs from the Argentine Patagonia (MCF37) Pp1395

J.B. Dimá^{a,b}, P.J. Barón^b, N.E. Zaritzky^{a,c}

^aCentro de Investigación y Desarrollo en Criotecnología de Alimentos (CIDCA -CONICET- UNLP) ^bCentro Nacional Patagónico (CONICET-CENPAT), ^cDepto de Ingeniería Química, Facultad de Ingeniería (UNLP)

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WEDNESDAY, MAY 25th - POSTER SESSION 5**14:00-18:30****Modelling the drying kinetics of pineapple slices in a tray dryer (MCF47) Pp1397**E. Rodrigues^a, J.N. da Silva^b, M.A. Chaves^c^aFaculdade Sudamérica, Brazil, ^bUniversidade Federal de Viçosa, Brazil, ^cUniversidade Estadual do Sudoeste da Bahia (UESB), Brazil**Algorithm and software for modelling of food protein hydrolysis kinetic (MCF94) Pp1399**

A. Abakarov

*Universidad Politécnica de Madrid, Spain***Porous media based model for deep-fat vacuum frying of potato chips (MCF113) Pp1401**

A. Warning, A.K. Datta, A. Dhall, D. Mitrea

*Cornell University, USA***Variable retort temperature optimization benefit in scheduling for retorts of different capacities in food canneries (MCF138) Pp1403**

A. Abakarov

*Universidad Politécnica de Madrid, Spain***Process simulation applied to studying strategies for spirit distillation from fermented must with high methanol content (MCF216) Pp1405**

F.R.M. Batista, A.J.A. Meirelles

*Department of Food Engineering, University of Campinas, Brazil***Ball's formula method revisited (MCF256) Pp1407**R.J. Simpson^{a,b}, S.F. Almonacid^{a,b}, M.M. Sanchez^a, H.Nuñez^a, A.A. Teixeira^c^aDepartamento de Ingeniería Química y Ambiental, Universidad Técnica Federico Santa María, Chile, ^bCentro Regional de Estudios en Alimentos Saludables, Chile, ^cDepartment of Agricultural and Biological Engineering, University of Florida, USA**Non-invasive on-line estimation of temperature distribution in freeze-drying processes (MCF277) Pp1409**

E. Lopez-Quiroga, C. Vilas, A.A. Alonso

*Process Engineering Group, IIM-CSIC, Spain***Computational modeling of heat transfer in food processes with 3-dimensional scanners (MCF280) Pp1411**

R. Uyar, F. Erdoğan

*Department of Food Engineering, University of Mersin, Turkey***Computer simulation of microbial transglutaminase production from potato wastes (MCF356) Pp1413**

M. Vázquez Vázquez, M.E. Guerra Rodríguez

*Department of Analytical Chemistry, Bromatology and Food Technology, University of Santiago de Compostela, Spain***Mass transfer coefficients determination from industrial processes of meat drying (MCF370) Pp1415**

I. Muñoz, J. Comaposada

*IRTA-Food Technology, Spain***Utilising multiphysics modelling to predict microbial inactivation induced by pulsed electric field processing (MCF409) Pp1417**

K. Knoerzer, M. Arnold, R. Buckow

*CSIRO Food and Nutritional Sciences, Australia***Simulation of batch steam deacidification of coconut oil (MCF410) Pp1419**S.M. Silva^a, K.A. Sampaio^a, R. Ceriani^b, A.J.A. Meirelles^a^aFaculty of Food Engineering, State University of Campinas, Brazil, ^bFaculty of Chemical Engineering, State Uni. of Campinas, Brazil**Optimization of technological parameters to produce breakfast cereal from rice and common bean flour by extrusion (MCF481) Pp1421**A.V. Carvalho^a, A. de O. Rios^b, P.Z. Bassinello^c^aEmbrapa Eastern Amazon, Brazil, ^bFederal University of Rio Grande do Sul, Brazil, ^cEmbrapa Rice and Beans, Brazil**Numerical model of heat and mass transfer during roasting coffee using 3D digitized geometry (MCF513) Pp1423**A. Fabbri^a, C. Cevoli^a, S. Romani^b, M. Dalla Rosa^b^aAgricultural Economics and Engineering Department, University of Bologna, Italy, ^bFood Science Dep. University of Bologna, Italy***Pp:** Page number in Printed Proceedings

WEDNESDAY, MAY 25th - POSTER SESSION 5**14:00-18:30****Multi-objective optimization of beef roasting (MCF557) Pp1425**S.M. Goñi^{a,b}, V.O. Salvadori^{a,b}^aCentro de Investigación y Desarrollo en Criotecología de Alimentos, CONICET-La Plata, Argentina, ^bMODIAL, UNLP, Argentina**A new method for dynamic modelling of bread dough kneading based on artificial neural network (MCF606) Pp1427**B. Lamrini^a, G. Della Valle^b, I.C. Trelea^c, N. Perrot^c, G. Trystram^a^aUMR GénIAL, AgroParisTech, France, ^bUR BIA, INRA, France, ^cUMR GMPA, AgroParisTech, France**A model to predict moisture migration in bulk powders subjected to temperature gradients (MCF624) Pp1429**J.E. Bronlund^{a,b}, A.H.J. Patero^a^aSchool of Engineering and Advanced Technology, Massey University, New Zealand, ^bRiddet Institute, New Zealand**Model development for fresh baked bread natural and forced cooling (MCF669) Pp1431**A. Pastukhov^a, G. Tucker^b, K. Niranjana^c^aUniversity of Refrigeration and Food Engineering, Russia, ^bDepartment of Baking and Cereal Processing, Campden BRI, UK,^cDepartment of Food and Nutritional Sciences, University of Reading, UK**Modelling microwave heating of food products: Influence of temperature dependant dielectric properties (MCF793) Pp1433**

S. Curet, O. Rouaud

ONIRIS/CNRS/GEPEA, LUNAM Université, France

Two dimensional mathematical model of bread baking: impact of dynamical mechanical properties function of local temperature and water content (MCF831) Pp1435F.M. Vanin^{a,b}, C. Doursat^c, D. Grenier^{a,b}, D. Flick^c, G. Trystram^c, T. Lucas^{a,b}^aFood Process Engineering Research Unit, Cemagref, France, ^bUniversité Européenne de Bretagne, France, ^cJRU N°1145 Engineering Processes Food, AgroParisTech, France**Statistical evaluation of camu-camu pulp pasteurization using a composed rotational experimental plan (MCF846) Pp1437**R. de Andrade Mattietto^a, V.M. da Matta^b^aEmbrapa Eastern Amazon, Brazil, ^bEmbrapa Food Technology, Brazil**Generalized convection and power-law models to represent the residence time distribution for non-ideal laminar flow in a double-pipe heat exchanger (MCF942) Pp1439**

L.K.Y. Murata, J.A.W. Gut

Department of Chemical Engineering, University of São Paulo, Brazil

A simple model to predict the mass and heat transfer during the combined osmotic-microwave drying of fruits (MCF981) Pp1441J.R. Arballo^{a,b}, L.A. Campañone^{a,b}, R.H. Mascheroni^{a,b}^aMODIAL-Facultad de Ingeniería, Universidad Nacional de la Plata, Argentina, ^bCentro de Investigación y Desarrollo en Criotecología de Alimentos, CONICET La Plata-UNLP, Argentina**Characterization of the rheological behaviour of Swiss-type cheese: a numerical and experimental coupled approach (MCF1069) Pp1443**Y. Laridon^{a,b}, C. Michon^{c,d}, D. Grenier^{a,b}, A. Hutin^{a,b}, C. Doursat^{c,d}, D. Flick^{c,d}, T. Lucas^{a,b}^aCemagref de Rennes, Unité TERE, France, ^bUniversité Européenne de Bretagne, France, ^cUMR 1145 Ingénierie Procédés Aliments, AgroParisTech, France, ^dUMR 1145 Ingénierie Procédés Aliments, AgroParisTech, France**Modeling of temperature and lethality distributions in continuous thermal processing using a tubular system (MCF1093) Pp1445**

V. Kechichian, G.P. Crivellari, J.A.W. Gut, C.C. Tadini

Department of Chemical Engineering, University of São Paulo, Brazil

Finite difference solutions for heat transfer during drying of cubic papaya particles (MCF1178) Pp1447R.D. Loss^a, I.P. Santos^b, E.P. Muniz^b, J.R.C. Proveti^b, P.S.S. Porto^a^aDepartamento de Engenharias e Computação, Universidade Federal do Espírito Santo, ^bDepartamento de Ciências Matemáticas e Naturais, Universidade Federal do Espírito Santo**Microwave puffing: Mathematical modeling and optimization (MCF1209) Pp1449**

V. Rakesh, A. Datta

Cornell University, USA

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Development of combined models to describe the residence time distribution in fluidized-bed bioreactor with light beads (MCF1256) Pp1451

G. Kostov^a, M. Angelov^b, I. Mihailov^c, D. Stoeva^c

^aDepartment of Technology of Wine and Brewery, ^bDepartment of Biotechnology, ^cDepartment of Technical Mechanics and Machine Engineering, University of Food Technology, Bulgaria

THURSDAY, MAY 25th - POSTER SESSION 6

08:30-13:00

Food materials science

P-FMS 0

Characterization of lipid by gc-ms in fermented salamis (FMS1128)

A. Llorente, E. Texpa, O. Noguez, R. Miranda, J. Lopez, V. Lara

Ingeniería Y Tecnología, FESC-UNAM, Mexico

Effect of lactic acid bacteria cultures in the microbiological quality of fermented salami (FMS1133)

A. Llorente, R. Pulido, A. Farres, V. Lara, J. Lopez, J. Rico

Ingeniería Y Tecnología, FESC-UNAM, Mexico

Changes of α-galactosides in grain legume seeds during germination, high pressure processing and storage (FMS27) Pp1165

P. Kadlec^a, J. Dostálová^b, J. Bernášková^b, M. Houška^c, J. Strohm^c, Z. Bubník^a

^aInstitute of Chemical Technology, Department of Carbohydrate Chemistry and Technol., Czech Republic, ^bInstitute of Chemical Technology, Department of Food Chemistry and Analysis, Czech Republic

Mechanical properties of golden delicious apple affected by maturation and storage (FMS43) Pp1167

F. Nabizadeh, M. Esmaili

Food Sci. Tech. Department, University of Urmia, Iran

Identification of volatile components isolated from indigenous fruits of Mozambique: Maphilwa (*Vangueria infausta*) (FMS58) Pp1169

R. Tique Raice^{a,b}, B. Bergenstahl^a, I. Sjolm^a, J. da Cruz Francisco^b

^aDep. of Food Technology, Engineering and Nutrition, Lund University, Sweden, ^bDep. of Chemistry, Eduardo Mondlane Uni, Mozambique

The evaluation of characteristic markers for organic and conventional wines differentiation by means of combination of some physico-chemical methods (FMS70) Pp1171

M. Polovka^a, Blanka Tobolková^{a,b}, Milan Suhaj^a

^aVUP Food Research Institute, Department of Chemistry and Food Analysis, Slovak Republic, ^bBrno University of Technology, Faculty of Chemistry, Czech Republic

The effect of the addition of vegetable oils in the mass and energy efficiency of meat derived product, low in saturated fat from buffalo meat (*Bubalus Bubalus*) (FMS75) Pp1173

J.F. Rey, L. Gualdrón

Universidad de la Salle, Colombia

Optical coherence tomography for quality control and microstructure analysis in food (FMS101) Pp1175

M. Leitner^a, G. Hanneschläger^a, A. Saghy^a, A. Nemeth^a, S. Chassagne-Berces^b, H. Chanvrier^b, E. Herremans^c, B.E. Verlinden^d

^aRECENDT - Research Center for Non Destructive Testing GmbH, Austria, ^bNESTLE SA, Nestle PTC., Switzerland, ^cKatholieke Universiteit Leuven, Belgium, ^dVCBT, Flanders Centre of Postharvest Technology, Belgium

Non destructive detection of brown heart in 'Braeburn' apples by Time-resolved Reflectance Spectroscopy (TRS) (FMS106) Pp1177

M. Vanoli^{a,b}, A. Rizzolo^a, M. Grassi^a, A. Farina^b, A. Pifferi^b, L. Spinelli^c, B. E. Verlinden^d, A. Torricelli^b

^aCRA-IAA, Italy, ^bPolitecnico di Milano, Dipartimento di Fisica, Italy, ^cIstituto di Fotonica e Nanotecnologie - CNR, Italy, ^dFlanders Centre of Postharvest Technology (VCBT), Belgium

Castor bean cake as raw material for biodegradable material (FMS174) Pp1179

R. Sengling Lacerda^a, A.M. Quinta Barbosa Bittante^b, H. Chambi^b, C. Abdala Gomide^a, I.C. Freitas Moraes^b, R. Aparecida de Carvalho^b, P.J. do Amaral Sobral^b

^aAnimal Science Department, Faculty of Animal Science and Food Engineering, University of São Paulo, Brazil, ^bFood Engineering Department, Faculty of Animal Science and Food Engineering, University of São Paulo, Brazil

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THURSDAY, MAY 25th - POSTER SESSION 6**08:30-13:00****Sensory properties of macaroni with and without green banana pulp and the application of ⁶⁰Cobalt Ionizing Radiation (FMS202) Pp1181**N.B. Alvarenga^a, E. Borralho^a, H. Escola^a, S. André^a, T. Carola^a, C.M. Ribeiro^a, J.M. Dias^a, M.S. Taipina^b, L.C.A. Lamardo^c, S.C. Balian^b, J.S.B. Canada^a^aInstituto Politécnico de Beja, Dep. TCA, Portugal, ^bInstituto de Pesquisas Energéticas e Nucleares, Brazil**Quality assessment of blueberries by computer vision (FMS234) Pp1183**

S. Matiacevich, P. Silva, J. Enrione, F. Osorio

Departamento de Ciencia y Tecnología de los Alimentos, Facultad Tecnológica, Universidad de Santiago de Chile, Chile

Effect of sodium alginate on bacterial, chemical and sensory characteristics in packaged common Kilka (*Clupeonella delitula*) (FMS263) Pp1185M. Seifzadeh^a, A.A. Motallebi^b, M.T. Mazloumi^b^aIranian Fisheries, National Fish Processing Center, Iran, ^bIranian Fisheries Research Organization, Iran**Chemical composition and allergic activity of bread – Relationship to non-yeast microorganisms and baking temperatures (FMS340) Pp1187**M. Shimoyamada^a, M. Hori^b, S. Kasuya^c, T. Suzuki^d, H. Nagano^e^aSchool of Food, Agricultural and Environmental Sciences, Miyagi University, Japan, ^bDepartment of Food and Nutrition, Gifu City Women's College, Japan, ^cFaculty of Regional Studies, Gifu University, Japan, ^dUnited Graduate School of Agricultural Science, Gifu University, Japan, ^eFaculty of Education, Gifu University, Japan**The effect of gamma irradiation on the nutritional properties of sunflower whole grain cookies (FMS402) Pp1189**M.S. Taipina^a, M.L. Garbelotti^b, L.C.A. Lamardo^b, J.S. Santos^a, M.A.B. Rodas^b^aInstituto de Pesquisas Energéticas e Nucleares, CNEN/SP, Brazil, ^bInstituto Adolfo Lutz, BQ, Brazil**Deep lipid oxidation estimated by lipid's weight change during storage (FMS432) Pp1191**

Y. Minemoto, Y. Hiraiwab, Y. Nojiri, T. Susukio, E. Nakajima, T. Kometani

Toyama National College of Technology, Japan

Determination of physicochemical parameters, microbiological counts and sensory attributes of cured pork loin (FMS542) Pp1195C.A. Almada^a, C. Hernández Pezzani^b, N. Szerman^{b,c}, M.C. de Landeta^c, A. Pighin^c^aDepartamento de Tecnología, Universidad Nacional de Luján, Argentina, ^bInstituto de Tecnología de Alimentos, Instituto Nacional de Tecnología Agropecuaria (INTA), Argentina, ^cDepartamento de Ciencias Básicas, Universidad Nacional de Luján, Argentina**Evaluation of microwave technology in blanching of broccoli (*Brassica oleracea* L, var *Botrytis*) as a substitute of a conventional scalded (FMS588) Pp1197**

M.P. Chaparro González, B. Díaz Reyes, M.J. Paredes Cherez

Bogota, Colombia

Vitamin C content in Latvian cranberries dried in convective and microwave vacuum driers (FMS614) Pp1199K. Dorofjejeva^a, T. Rakcejeva^a, R. Galoburda^a, L. Dukalska^a, J. Kviestis^b^aLatvia University of Agriculture, Department of Food Technology, Latvia, ^bLatvia State Institute of Fruit-Growing, Latvia**Use of dried pumpkins in wheat bread production (FMS618) Pp1201**

T. Rakcejeva, R. Galoburda, L. Cude, E. Strautniece

Latvia University of Agriculture, Department of Food Technology, Latvia

Energy saving potential in freezing applications by applying cold thermal energy storage with solid carbon dioxide (FMS631) Pp1203

A. Hafner, T. Ståle Nordtvedt, I. Rumpf

SINTEF Energy Research, Norway

Impact of baking conditions on bread staling (FMS771) Pp1205

E. Besbes, V. Jury, J.Y. Monteau, A. Le-Bail

LUNAM Université, ONIRIS, CNRS, GEPEA, UMR 6144, France

Microwave assisted fluidized bed drying of beetroot (*Beta vulgaris* L.) (FMS772) Pp1207M.A. Khan^a, Y. Kumar^b, S. Zaidi^c, Iffat Ali^c^aDept. of Post Harvest Engg. & Tech., AMU, India, ^bAICRP on PHT, AMU, India, ^cDept. of Chemical Engg., AMU, India***Pp: Page number in Printed Proceedings**

THURSDAY, MAY 25th - POSTER SESSION 6

08:30-13:00

Okadaic acid, dinophysistoxin-1 and related esters in Greek mussels (*Mytilus galloprovincialis*): Determination and decontamination using ozonation (FMS764) Pp1209

A.P. Louppis^a, A.V. Badeka^a, P. Katikou^b, D. Georgantelis^a, E.K. Paleologos^c, M.G. Kontominas^a

^aDepartment of Chemistry, University of Ioannina, Greece, ^bNational Reference Laboratory of Marine Biotoxins, Institute of Food Hygiene, Ministry of Rural Development and Foods, Greece, ^cGeneral Chemical State Laboratory, Ioannina Division, Greece

Effect of rosemary oil on functional properties of HPMC films at different concentration (FMS765) Pp1211

N. Perone^a, E. Torrieri^{a,b}, S. Cavella^{a,b}, P. Masi^{a,b}

^aDepartment of Food Science, University of Naples Federico II, Italy, ^bCAISIAL - Centre of Food Innovation and Development in the Food Industry, University of Naples Federico II, Italy

Effect of sugar substitute on sucrose crystal growth rate (FMS818) Pp1213

J. He^a, R. Bund^b, R. Hartel^b

^aJames Madison Memorial High School, USA. ^bDep. of Food Science, UW-Madison, USA

Effect of electrolytes content on the electro-osmotic dewatering of agro-industrial sludge (FMS823) Pp1215

M. Citeau, O. Larue, E. Vorobiev

Laboratoire de Transformations Intégrées de la Matière Renouvelable, Université de Technologie de Compiègne, France

The amount of acrylamide consumed from traditionally fried potatoes in Latvia (FMS828) Pp1217

I. Murniece^a, J. Rosen^b, K.-E. Hellenas^b, D. Karklina^a, R. Galoburda^a

^aDepartment of Food Technology, Latvia University of Agriculture, Latvia, ^bChemistry Division 1, National Food Administration, Sweden

Effect of ultrasound, and magnetic fields on pH and texture (TPA) in beef loin tuna (*Thunnus albacares*) (FMS900) Pp1219

V.M. Gélvez Ordóñez, L. Fuentes Berrio

University de Pamplona-ab University of Cartagena-Colombia, Group Research in Engineering and Food Technology: GINTAL, University of Pamplona- Colombia

Quasiisothermal analysis in a MDSC for protein denaturizing in lyophilized meat (FMS926) Pp1221

J.L. Arjona-Román^a, R. Meléndez-Pérez^{a,b}, L. Herrera-Pérez^a, R. Velázquez-Castillo^b

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Chemical characterization of «terroir» effect in garlic productions (FMS972) Pp1223

J. Auger^a, I. Arnault^b

^{a,b}IRBI, UMR CNRS 6035, François Rabelais de Tours, UFR Sciences et Techniques, France, ^bCETU Innophyt, Université François Rabelais de Tours, UFR Sciences et Techniques, France

Development and evaluation of canned pâté-based tilapia MSM (FMS977) Pp1225

D. De G. C.Freitas^a, A.L. Santos^b, A.A.L. Furtado^a, M.P. Stephan^a, A.L. Pentead^a

^aEmbrapa Food Technology, Brazil, ^bFederal Rural University of Rio de Janeiro, Brazil

Study of adsorption isotherm and microbiological quality of fish meal type 'piracui' of Acari-Bodo (*Liposarcus Pardalis, Castelnau, 1855*) (FMS1006) Pp1227

D.C. Santos^a, L.F.H. Lourenço^b, S.C.A. Ribeiro^c, H. Almeida^b, E.A.F. Araujo^b

^aCentro de Educação Profissional Prof. Antônio Lima, Boa Vista, Brasil, ^bUniversidade Federal do Pará, Belém, Brasil, ^cUniversidade do Estado do Pará, Belém, Brasil

Influence of translucency and surface moisture determination of *Ulva spp macroalgae* leaves (FMS1025) Pp1229

I. Kasahara, N. Cifuentes

Escuela De Alimentos, Universidad Católica De Valparaíso, Chile

Fibers of calcium alginate produced by a microfluidic device and its mechanical properties (FMS1031) Pp1231

T. Cuadros^a, O. Skurtys^b, J.M. Aguilera^a

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Effect of starter culture and nisin for the preservation of fishburger obtained tambaqui (*Colossoma macropomum*) and vacuum packed (FMS1104) Pp1233

M.A.C. Velloso^a, E.F. Araújo^b, L.H. Lourenço^b, S.C.A. Ribeiro^c

^aPostgraduate Program in Food Science and Technology, ^bFederal University of Pará, Belém, Brazil, ^cState University of Pará, Brazil

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THURSDAY, MAY 25th - POSTER SESSION 6**08:30-13:00****Enzymatic extraction of protein from toasted and not toasted soybean meal (FMS1176) Pp1235**

R. Ströher, N. Curvelo Pereira, G.M. Zanin

*Universidade Estadual de Maringá, Maringá, Paraná, Brasil***Metal-based nanocomposites as antimicrobials in food packaging applications (FMS1203) Pp1237**A. Fernandez^a, E. Lloret^b, A. Llorens^a, P. Picouet^b^a*Instituto de Agroquímica y Tecnología de Alimentos, CSIC, Avda, Spain*, ^b*Departament de Tecnologia dels Aliments, Institut de Recerca i Tecnologia Agroalimentàries (IRTA), Spain***Effect of transglutaminase on heat-induced gel properties at acid pH of mixtures of plasma and haemoglobin hydrolysates from porcine blood (FMS1229) Pp1239**

E. Sagner, A. Illanes, E. Espigulé, D. Parés, S. Hurtado, M. Toldrà, C. Carretero

*Institut de Tecnologia Agroalimentària (INTEA), University of Girona, Spain***Use of porcine blood plasma in “phosphate free frankfurters” (FMS1230) Pp1241**

S. Hurtado, I. Dagà, E. Espigulé, D. Parés, E. Sagner, M. Toldrà, C. Carretero

*Universitat de Girona INTEA – Institut de Tecnologia Agroalimentària, Spain***Comparative study of foaming activity of albumin-rich lupin protein isolates via electrical and volumetric measurements (FMS1240) Pp1243**

V.T. Papoti, T.D. Karapantsios, G. Doxastakis

*School of Chemistry, Aristotle University of Thessaloniki, Greece***Survey of contamination mycoflora of consumed rice in Mazandaran, Iran (FMS1247) Pp1245**S.R. Aghili^{a,d}, A.R. Khosravi^b, T. Shokohi^a, B. Salmanian^c^a*Department of Medical Mycology and Parasitology, Faculty of Health, Mazandaran University of Medical Sciences Sari, Iran,*^b*Mycology Research Center, Faculty of Veterinary Medicine, University of Tehran, Iran* ^c*Council of education, Mazandaran University of Medical Sciences Sari, Iran,* ^d*Faculty of Veterinary Medicine, Islamic Azad University, Iran***Food packaging and materials interaction****P-FMS 7****Evaluation of the biocide properties of whey-protein edible films with potassium sorbate to control non-O157 Shiga Toxin-producing *Escherichia coli* (AFT122) Pp973**L.M. Pérez^a, C.E. Balagué^b, A.C. Rubiolo^c, R.A. Verdini^a^a*Departamento de Química Analítica, Universidad Nacional de Rosario (UNR) & Instituto de Química Rosario (IQUIR, UNR-CONICET), Argentina,* ^b*Área Bacteriología Clínica, Universidad Nacional de Rosario, Argentina,* ^c*Instituto de Desarrollo Tecnológico para la Industria Química (INTEC), Universidad Nacional del Litoral, Argentina***Effect of drying temperature and beeswax content on moisture sorption isotherms of whey protein emulsion films (AFT123) Pp975**M. Soazo^a, A.C. Rubiolo^a, R.A. Verdini^b^a*Instituto de Desarrollo Tecnológico para la Industria Química (INTEC), CONICET, Universidad Nacional del Litoral, Argentina,*^b*Departamento de Química Analítica, Facultad de Ciencias Bioquímicas y Farmacéuticas, Universidad Nacional de Rosario (UNR) & Instituto de Química Rosario (IQUIR, UNR-CONICET), Argentina***Multilayer, flexible food packaging structures: Design and response of plastic films to accelerated ageing (FMS134) Pp977**

P.A. Tarantili

*National Technical Univ. of Athens, School of Chemical Eng., Polymer Technology Lab., Greece***Individual and combined performance of nisin and potassium sorbate supported in tapioca starch edible films (AFT189) Pp979**C. Basch^a, J. Carpenco^a, R.J. Jagus^a, S. Flores^{b,c}^a*Departamento de Ingeniería Química, Universidad de Buenos Aires, Argentina,* ^b*Departamento de Industrias, Universidad de Buenos Aires, Argentina,* ^c*Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)***Effects of whey protein edible coating on bacterial, chemical and sensory characteristics of frozen common Kilka (*Clupeonella delitula*) (AFT222) Pp981**M. Seifzadeh^a, A.A. Motallebi^b, M.T. Mazloumi^b^a*Iranian Fisheries, National Fish Processing Center, Iran,* ^b*Iranian Fisheries Research Organization, Iran****Pp: Page number in Printed Proceedings**

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Food structure and migration of additives from plastic packaging (FMS342) Pp983

K. Scharnhorst, I. Steiner

Research Area of Natural Products and Food Chemistry, Institute of Chemical Engineering, Vienna University of Technology, Austria

Development and characterization of composite edible films from mucilage of *Salvia hispanica* and whey protein concentrate (FMS379) Pp985

L.A. Muñoz^{a,b}, J.M. Aguilera^b, A. Cobos^a, O. Diaz^b

^aUni. de Santiago de Compostela, Facultad de Ciencias, Dep. de Química Analítica, Nutrición y Bromatología, Área de Tecnología de Alimentos, Spain, ^bPontificia Uni. Católica de Chile, Facultad de Ingeniería, Departamento de Ingeniería Química y Bioprocesos, Chile

Quality characteristics of air-dried apple rings: influence of storage time and fruit maturity measured by time-resolved reflectance spectroscopy (AFT439) Pp987

A. Rizzolo^a, M. Vanoli^{a,b}, G. Cortellino^a, L. Spinelli^c, A. Torricelli^b

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Effects of clay type and content on mechanical, water barrier and antimicrobial properties of agar-based nanocomposite films (AFT472) Pp989

S.-I. Hong^a, H.-H. Lee^a, J.-W. Rhim^b

^aKorea Food Research Institute, Republic of Korea, ^bMokpo National University, Republic of Korea

Electrospinning of polystyrene fibers functionalized with inclusion complex of 1-methylcyclopropene and α -cyclodextrin (FMS504) Pp991

T. Loon Neoh, H. Yoshii

Department of Applied Biological Science, Kagawa University, Japan

Monitoring and controlling system based on configuration software of microwave vacuum drying machine (AFT601) Pp993

Q. Han, S. Li, Y. Li, J. Wang, J. Ma, D. Zhao

Chinese Academy of Agricultural Mechanization Sciences, China

Antimony leaching from polyethylene terephthalate (PET) plastics used for beverage in Japan (FMS615) Pp995

S. Rungchang^a, P. Suthiluk^b, S. Numthuan^a, T. Satake^a

^aGraduate School of Life and Environmental Sciences, University of Tsukuba, Japan, ^bSchool of Agro-Industry, Mae Fah Luang University, Thailand

Predicted versus steady state aroma transfer through packaging films (FMS639) Pp999

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^aDepartment of Food Science and Technology, Science and Research Branch, Islamic Azad University, Iran, and LSGA, ENSAIA-INPL, Nancy University, France, ^bDepartment of Food Science and Technology, Faculty of Biosystem Engineering, College of Agriculture and Natural Resources, University of Tehran, Iran

Development of active packaging containing natural antioxidants (FMS730) Pp1001

C. Contini^a, M.G. Katsikogianni^b, F.T. O'Neill^b, M. O'Sullivan^a, D.P. Dowling^b, F.J. Monahan^a

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Oxygen scavenging films for food application (AFT802) Pp1003

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Modelling passive modified atmosphere packaging of strawberries: numerical analysis and model validation (AFT808) Pp1005

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THURSDAY, MAY 25th - POSTER SESSION 6**08:30-13:00****Physical-chemical properties of alginate/chitosan composite films containing natamycin as antimicrobial agent (AFT840) Pp1007**

M. Altenhofen da Silva, A.C. Krause Bierhalz, T. Guenter Kieckbusch

*School of Chemical Engineering, University of Campinas (FEQ/UNICAMP), Brazil***Banana flour films (*Musa paradisiaca*): Evaluation of film properties in terms of process variables (AFT849) Pp1009**F.M. Pelissari^a, M.M. Andrade-Mahecha^a, P.J. do Amaral Sobral^b, F.C. Menegalli^a^a*Department of Food Engineering, State University of Campinas, Brazil,* ^b*Department of Food Engineering, University of São Paulo, Brazil***Life cycle assessment of multilayer polymer film used on food packaging field (AFT918) Pp1011**V. Siracusa^a, M. Dalla Rosa^b, S. Romani^b, P. Rocculi^b, U. Tylewicz^b^a*Department of Industrial and Mechanical Engineering, University of Catania, Italy,* ^b*Department of Food Science, University of Bologna, Italy***Modified atmosphere packaging failure and its effect on the microbiological quality of the product (FMS951) Pp1013**C. Voidarou^a, G. Rozos^a, A. Alexopoulos^a, S. Plessas^a, E. Stavropoulou^a, P.G. Demertzis^b, K. Demertzi-Akrida^b, E. Bezirtzoglou^a^a*Democritus University of Thrace, Faculty of Agricultural Development, Department of Food Science and Technology, Laboratory of Microbiology, Biotechnology and Hygiene, Greece,* ^b*University of Ioannina, Section of Industrial and Food Chemistry, Department of Chemistry, Greece***Edible films-based on κ-carrageenan/locust bean gum – effects of different polysaccharide ratios on film properties (AFT998) Pp1015**

J.T. Martins, M.A. Cerqueira, A.I. Bourbon, A.C. Pinheiro, A.A. Vicente

*IBB – Institute for Biotechnology and Bioengineering, Universidade do Minho, Portugal***Release of natamycin from alginate and pectin films intended for food packaging (AFT1047) Pp1017**

A.C. Krause Bierhalz, M. Altenhofen da Silva, T. Guenter Kieckbusch

*School of Chemical Engineering, University of Campinas, Brazil***Evaluation of internal organic coating of metal packaging in packaging cupuaçu pulp (*Theobroma Grandiflorum Schum*) (FMS1055) Pp1019**A.M.P.F. Felipe^a, C.M.A. Freire^b^a*Universidade Federal do Pará, Brasil,* ^b*Universidade Estadual de Campinas, Brasil***Prolongation of table olive shelf-life by combining edible coating application and modified atmosphere packaging (MAP) (AFT1063) Pp1021**P. Moutsatsou^a, C. Tzia^a, T. Kerasiotis^b, D. Skondras^b^a*Laboratory of Food Chemistry and Technology, School of Chemical Engineering, National Technical University of Athens, Greece,* ^b*Gaea Products S.A., Greece***Barrier properties of carrageenan/pectin biodegradable compositefilms (AFT1089) Pp1023**V.D. Alves^a, R. Castelló^b, A.R. Ferreira^b, N. Costa^b, I.M. Fonseca^b, I.M. Coelho^b^a*CEER – Biosystems Engineering, Technical University of Lisbon, Portugal,* ^b*Requimte/CQFB, Universidade Nova de Lisboa, Portugal***Obtainment of modified banana starch films by extrusion processing and its partial characterization (AFT1126) Pp1025**J. Solorza-Feria^a, J. Pérez-González^b, J.R. Rendón-Villalobos^a^a*Centro de Desarrollo de Productos Bióticos del IPN, MÉXICO,* ^b*Laboratorio de Reología, Escuela Superior de Física y Matemáticas, Instituto Politécnico Nacional, MÉXICO***Linseed mucilage and chitosan composite films: Preparation, physical, mechanical and microstructure properties (FMS1196) Pp1027**L.E. Latorre Salamanca^a, L.E. Pérez Cabrera^a, G.C. Díaz Nárvaes^a, L.R. Barba de Alba^b^a*Department of Food Technology, Universidad Autónoma de Aguascalientes, Mexico,* ^b*Department of Agriculture, Universidad Autónoma de Aguascalientes, Mexico.****Pp: Page number in Printed Proceedings**

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Engineering properties of foods

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Antioxidative activities of the polysaccharides extracted from the mushroom *Ganoderma lucidum* (EPF316) Pp1383

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Characteristics of selected functional properties of apple powders obtained by the foam-mat drying method (EPF484) Pp1385

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Effect of different combination of wall materials on the encapsulation efficiency of flaxseed oil microencapsulated by spray drying (EPF777) Pp1387

H.C.F. Carneiro^a, R.V. Tonon^{a,c}, C.R.F. Grosso^b, M.D. Hubinger^a

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Liquid-liquid equilibrium for ternary systems containing, ethyl esters, anhydrous ethanol, and glycerol at 323.15 K and 353.15 K (EPF984) Pp1389

L.A. Follegatti-Romero, F.R.M. Batista, M. Lanza, E.A.C. Batista, A.J.A. Meirelles

ExTrAE – Laboratory of Extraction, Applied Thermodynamics and Equilibrium, Department of Food Engineering, Faculty of Food Engineering, University of Campinas, UNICAMP, Brazil

Phase distribution of ethanol, and water in ethyl esters at 298.15 K and 333.15 K (EPF985) Pp1391

L.A. Follegatti-Romero, F.R.M. Batista, M. Lanza, E.A.C. Batista, A.J.A. Meirelles

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Solid-liquid affinity in maltodextrin agglomerates (EPF1167) Pp1393

L.S. Meraz Torres, M.X. Quintanilla Carvajal, H. Hernández Sánchez, G. Fidel Gutiérrez López, L. Alamilla Beltrán

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Engineering properties modeling

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Experimental and neural network prediction of a tray drier for drying vegetal pear (EPF59) Pp1369

A. Rosas, O. Baez, G.R. Urrea, G. Luna

División de Estudios de Posgrado e Investigación, Instituto Tecnológico de Orizaba, México

Drying studies of sorghum for forage and biomass production (EPF87) Pp1371

D.G. Mercer^a, T.J. Rennie^b, A. Tubeileh^c

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Initial work on developing a cooking protocol for producing re-structured meat under controlled conditions. (EPF667) Pp1373

M.R. Ismail-Fitry, A.H.J. Paterson, B.H. Wilkinson, R.W. Purchas

School of Engineering and Advanced Technology, Massey University, New Zealand

Development and nutritional composition and sensory comparison between acceptance and bread traditional high soy protein and soluble prebiotic fiber (EPF1163) Pp1375

M.G.B. Cadioli^a, M.A.B. Rodas^a, M.L. Garbelotti^a, E. Marciano^a, M.S. Taipina^b

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Design of a knowledge acquisition and management system for starch bioconversion (EPF1166) Pp1377

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Investigation of dehydration characteristics of protein / lactose powders (EPF1310) Pp1379

D.J. O'Callaghan, S.A. Hogan

Teagasc Food Research Centre, Moorepark, Ireland

Management and optimization of the food chain-from production to consumption

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A simplified method for determination of the sour cassava starch expansion property (MFS20) Pp1839

M. Janete Angeloni Marcon^a, D. Jacob Kurtz^a, M. Maraschin^a, V. Reginatto^a, I. Mottin Demiate^b, E.R. Amante^a

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Influence of room temperature on food safety in refrigerated display cabinet (MFS89) Pp1841

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Antemortem and postmortem biochemistry, drip loss and lipid oxidation of European sea bass muscle tissue (MFS179) Pp1843

C. Nathanailides, S. Panopoulos, F. Kakali, C. Karipoglou, D. Lenas

Department of Aquaculture & Fisheries, TEI of Epirus, Greece

Impact of initial handling and subsequent storage conditions on the safety and keeping quality of sardines (MFS707) Pp1845

K. Chatzikyriakidou^{a,b}, E. Katsanidis^a

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Survival of *Salmonella* and *Escherichia coli* O157:H7 during freezing, thawing and cooking of ground beef patties, simulating common household practises (MFS883) Pp1847

S.G. Manios, T. Giovanis, A. Lalechou, P.N. Skandamis

Laboratory of Food Quality Control and Hygiene, Dep. of Food Science and Technology, Agricultural University of Athens, Greece

European food, technology and nutrition declaration (EFTN Declaration) (MFS1219) Pp1849

P. Raspor, L. Baša

Chair of Biotechnology, Microbiology and Food Safety, Biotechnical Faculty, University of Ljubljana, Slovenia

Optimization of shelf life distribution of frozen fish products based on modelling and TTI monitoring (MFS1249) Pp1851

M.N. Giannoglou, M. Loukianou, K. Tsatsaragou, T. Tsironi, P.S. Taoukis

Laboratory of Food and Chemistry, School of Chemical Engineering, National Technical University of Athens, Greece

Advances in food processing technologies

P-AFT 0

Effect of magnetic fields and ultrasound on aerobic mesophiles and histamine in beef loin tuna loin tuna (*Thunnus albacares*) (AFT167) Pp2017

V.M. Gélvez Ordóñez, L. Fuentes Berrio

University de Pamplona, University of Cartagena, Colombia

Relationship between pectic substances and strand separation of cooked spaghetti squash (AFT594) Pp2019

K. Ishii^a, A. Teramoto^b, H. Kuwada^a, Y. Jibu^c, M. Tabuchi^c, Y. Kimura^a, M. Fuchigami^a

^aDepartment of Nutrition and Life Science, Fukuyama University, Japan, ^bDepartment of Health and Nutrition, Kanto Gakuin University, Japan, ^cDepartment of Nutritional Science, Okayama Prefectural University, Japan

Improvement of an enzymatic process to elaborate orange segments in syrup (AFT757) Pp2021

R. Robles-López, A. Dorantes-Nieto, D. Díaz-Carvajal, R.R. Robles-De la Torre, M.D. Bibbins-Martínez

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The technology of butters' enriching with carrots' powder (AFT1236) Pp2023

T.O. Rashevskaya, O.M. Vasheka

National University of Food technologies, Ukraine

Production of ewe's milk cheese using calf rennet and a plant coagulant from flowers of cardoon

***Cynara cardunculus*: Proteolysis during ripening (AFT1242) Pp2025**

J. Fernández-Salguero, A. Pino, E. Galán

Tecnología de los Alimentos, University of Córdoba, Spain

Production of ewe's milk cheese using calf rennet and a plant coagulant from flowers of cardoon

***Cynara cardunculus*: Sensory characteristics during ripening (AFT1243) Pp2027**

J. Fernández-Salguero^a, E. Galán^a, R. González^b

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Functional drink production through pomegranate juice fermentation (AFT1250) Pp2029

S. Plessas, M. Koulis, A. Alexopoulos, E. Bezirtzoglou

Laboratory of Microbiology, Democritus University of Thrace, Greece

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CLOSING COMMENTS

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HighTech Europe Workshop**Open innovation in food processing****Challenges and essentials for reinventing R&D in an open innovation ecosystem (INM1311) Pp2221**

I.S. Saguy

*The Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Israel***Philosophy of an open R&D system Pp2223**

K. Chida

*Generall Mills***Creating value for SMEs in the food industry through open innovation - Examples from Norway Pp2223**

Ø. Fylling-Jensen

*Nofima AS***Open innovation at Mars: join-up, speed-up, scale-up Pp2223**

O. Fleurot

*Mars GmbH***Innovation sharing by cooperative R&D (INM1313) Pp2224**

D. Albers

*Frutarom Savory Solutions GmbH, Germany***HighTech Europe Interactive Technology Portal - New tool for innovation in food processing (INM1312) Pp2225**K. Lienemann^a, N. Ay^a, R. Groeneveld^b, D. Willems^b, I. Van der Plancken^c^aDeutsches Institut für Lebensmitteltechnik e.V., Germany, ^bWageningen UR, Food & Biobased Research, The Netherlands, ^cKatholieke Universiteit, Laboratory of Food Technology, Belgium**InsideFood Workshop****Novel technologies to explore food microstructure****Food microstructure: a 3-D experience Pp2227**

Bart Nicolai

*K.U.Leuven***Possibilities of X-ray nano-CT for internal quality assessment of food products (FMS112) Pp2227**E. Herremans^a, S. Chassagne-Berces^b, H. Chanvrier^b, A. Atoniuk^c, R. Kusztal^c, E. Bongaers^d, B.E. Verlinden^e, E. Jakubczyk^f, P. Estrade^g, P. Verboven^a, B. Nicolai^{a,e}^aKatholieke Universiteit Leuven, Belgium, ^bNESTEC SA, Nestle PTC. Switzerland, ^cCHABER Ltd, Poland, ^dSkyScan NV, Belgium, ^eVCBT, Flanders Centre of Postharvest Technology, Belgium, ^fSGGW, Warsaw University of Life Sciences, Dep. Food Eng. & Process MGMT, Poland, ^gVSG, Visualization Sciences Group SAS, France**Optical Coherence Tomography (OCT) for quality control and microstructure analysis in food (FMS101) Pp2229**M. Leitner^a, G. Hanneschläger^a, A. Saghy^a, A. Nemeth^a, S. Chassagne-Berces^b, H. Chanvrier^b, E. Herremans^c, B.E. Verlinden^d^aRECENDT - Research Center for Non Destructive Testing GmbH, Austria, ^bNESTLE SA, Nestle PTC., Switzerland, ^cKatholieke Universiteit Leuven, Belgium, ^dVCBT, Flanders Centre of Postharvest Technology, Belgium**Effect of fibres and whole grain content on quality attributes of extruded cereals (FMS119) Pp2231**S. Chassagne-Berces^a, M. Leitner^b, A. Melado^c, P. Barreiro^c, E. Crostina Correa^c, I. Blank^a, J.-C. Gumy^a, H. Chanvrier^a^aNESTEC SA Switzerland, ^bRECENDT, Austria, ^cUPM, Spain**NMR microscopy and NMR HR-MAS on apples of different qualities after different storage conditions Pp2233**

D. Gross, M. Spraul, E. Humpfer, H. Schaefer, A. Melado, T. Defraeye, P. Verboven

*Bruker Biospin, Germany****Pp: Page number in Printed Proceedings**

A Digital laboratory for visual analysis of materials microstructure Pp2233

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