

## Poster Titles

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### Set Up

3:00 – 4:30 p.m. Sunday, September 19

### Authors Present

5:00 – 7:30 p.m. Sunday, September 19

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## Analytical

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A mechanical-acoustical test for the determination of crispness. J.E. Visser (1,2), J.M.J.G. Luyten (1,2), W.J. Lichtendonk (1,3), and T. VAN VLIET (1,2). (1) Wageningen Centre for Food Sciences, Wageningen, Netherlands; (2) Wageningen UR, Wageningen, Netherlands; (3) TNO Food Research and Nutrition, Zeist, Netherlands

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Addition of lipolytic enzymes during gluten and wheat flour dough mixing: Effect on the lipid fractions (hydrolysis and oxidation) and on the oxygen consumption. S. Néron, L. Victor, E. Manceau, R. GARCIA, J. Potus, and J. Nicolas. Conservatoire National des Arts et Métiers, Paris, France

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Comparison of extraction and clean-up strategies for HPLC added folic acid determination. P. KRISHNAN, S. Reddy, and T. Hoffman. South Dakota State University, Brookings, SD

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Determining frying oil degradation by near infrared spectroscopy. C.L. Ng, R.L. WEHLING, and S.L. Cuppett. University of Nebraska, Lincoln, NE

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Interpretation of solvent retention capacity profiles for wheat flour functionality and performance: Diagnostic responses to aqueous ethanol, reducing agents, and SDS as SRC solvents. M. MIKLUS, M. Kweon, L. Slade, and H. Levine. Kraft Foods, East Hanover, NJ

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Laser diffraction sizing used to study wheat flour and starch particle sizes. D.B. BECHTEL and J.D. Wilson. USDA-ARS, Manhattan, KS

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Optimization of dityrosine standard synthesis. M. TILLEY (1), R.E. Benjamin (2), and K.A. Tilley (2). (1) USDA-ARS, Manhattan, KS; (2) Kansas State University, Manhattan, KS.

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Rapid methods to assure food safety requirements of cereals and cereal products. R.E. POMS (1) and J. Stroka (2). (1) ICC, Vienna, Austria; (2) IRMM-JRC, Geel, Belgium

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Sequential extraction of nonpolar and polar classes of wheat flour lipids using supercritical-CO<sub>2</sub> with ethanol modifier. M.S. RAM and O.K. Chung. USDA-ARS, Manhattan, KS

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Starch testing with the new Viscograph viscograph generation. S. IAQUEZ. C.W. Brabender Instruments, South Hackensack, NJ

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Testing four solvents for solvent retention capacity in hard winter wheat flour and their use in a regression equation to predict bread loaf volume. Z.S. Xiao (1), S.H. PARK (2), O.K. Chung (1), M.S. Caley (1), and P.A. Seib (2). (1) USDA-ARS, Manhattan, KS; (2) Kansas State University, Manhattan, KS

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The determination of phytic acid in commercial weaning foods. H.R. PARK (1), S.H. Kim (2), G.U. Lee (2), M.H. Kim (1), and K.S. Kwon (1). (1) National Institute of Toxicological Research, Seoul, South Korea; (2) Seoul Regional Korea Food & Drug Administration, Seoul, South Korea

## Baking

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A micro-baking procedure: Its relation to pup straight-dough and pound sponge and dough baking methods. M.S. CALEY (1), S.H. Park (2) and O.K. Chung (1). (1) USDA-ARS, Manhattan, KS; (2) Kansas State University, Manhattan, KS

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Addition of xylanases with different substrate selectivities and inhibitor sensitivities and of xylanase inhibitors leads to insight into the mechanisms of dough syruing in refrigerated doughs. W. Gys, C.M. COURTIN, and J.A. Delcour. Katholieke University Leuven, Leuven, Belgium

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Baker's yeast production in date syrup medium. A. NASSERI (1) and R. Behbehani (2). (1) Shiraz University, Shiraz, Iran; (2) Islamic Azad University, Science and Research Campus, Chemical Engineering Department, Tehran, Iran

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Chemical, physical and sensorial evaluation of bread made with different proportion of wheat: Aroid (*Xanthosoma sagittifolium*) flour. E.E. PÉREZ (1) and E. Pacheco de Delahaye (2). (1) Instituto de Ciencia y Tecnología de Alimentos, Caracas, Venezuela; (2) Universidad Central de Venezuela, Caracas, Venezuela

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Effect of baking and fermentation on added folic acid and endogenous folates stability in rye and wheat breads. E.M. GUJSKA, A. Kuncewicz, and K. Majewska. University of Warmia and Mazury, Olsztyn, Poland

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Effect of sourdough fermentation on levels of bioactive compounds of rye. K. KATINA (1), K.-H. Liukkonen (1), A.-M. Lampi (2), S.-M. Heinonen (2), A. Peltoketo (2), J.-M. Pihlava (3), and K. Poutanen (1). (1) VTT Biotechnology, Espoo, Finland; (2) University of Helsinki, Helsinki, Finland; (3) MTT, Jokioinen, Finland

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Evaluation of rheological and bread quality characteristics of Mexican bread wheat cultivars. R. ORTEGA-RAMIREZ (1), E. Domínguez-Rascón (1), C. Medina-Rodríguez (1), M.G. Salazar-García (1), G.A. Lopez-Ahumada (1), J. Borboa-Flores (1), and B. Ramírez-Wong (1). (1) Universidad de Sonora, Hermosillo, SON, México

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Fish surimi and inulin—Unique ingredients in gluten-free bread!. E. GALLAGHER (1), T.R. Gormley (1), G. Downey (1), and E.K. Arendt (2). (1) Teagasc, Dublin, Ireland; (2) University College Cork, Ireland

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Performance of hard red spring wheat varieties in stone milled flour and artisan bread baking. J.A. FRÉGEAU-REID (1), P. Gélinas (2), K. Dessureault (2), and J. Gale (1). (1) Agriculture & Agri-Food Canada, Ottawa, ON, Canada; (2) Agriculture & Agri-Food Canada, Saint-Hyacinthe, QC, Canada

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Physicochemical and texture properties in cookies is ruled by soy-oats ratio in a nutritional formula. E.C. Gutiérrez-Féliz, Z. Morales-Sesma, and R.L. VIDAL-QUINTANAR. Universidad de Sonora, Hermosillo, SON, México

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Production of bread, pasta and wafers from purple wheat. E. BERGHOFER (1), I. Kreilmayer (1), M. Roggenhofer (1), and P.K.W. Ng (2). (1) Boku University of Natural Resources and Applied Life Sciences, Vienna, Austria; (2) Michigan State University, East Lansing, MI

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Relationship among rheofermentometer measurements and functional properties of bread wheat flours. C.L. MEDINA-RODRIGUEZ, J.E. Argüelles-Carlon, B. Ramírez-Wong, G.A. López-Ahumada, M.G. Salazar-García, A.I. Ledesma-Osuna, and R. Ortega-Ramírez. Universidad de Sonora, Hermosillo, SON, México

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Use of vital gluten and malt in blends of durum wheat and baker wheat flours for bread elaboration. G.A. LOPEZ-AHUMADA, M. Cota-González, G. Félix-Sauceda, B.O. Briceño-Torres, R. Ortega-Ramírez, and B. Ramírez-Wong. Universidad de Sonora, Hermosillo, SON, México

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Composition and potential health benefits of Sustagrain barley. C.W. NEWMAN and R.K. Newman. Montana State University, Bozeman, MT

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Evaluation of Sustagrain barley flour in cakes and muffins. R.K. NEWMAN and C.W. Newman. Montana State University, Bozeman, MT

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Molecular characterization of hull-less and malting Brazilian barley varieties. M.A. Kroth, M.S. Ramella, C. Tagliari, A. DE FRANCISCO (2), and A.C. Maisonnave Arisi. Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil

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Phenolic compounds and discoloration of barley food products. Z. QUINDE and B.-K. Baik. Washington State University, Pullman, WA

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Phenolic compounds in colored-aleurone barley varieties of diverse origins. T. BETA (1), N. Ames (2), S. Nam (3), and M. Therrien (4). (1) University of Manitoba, Winnipeg, MB, Canada; (2) Agriculture & Agri-Food Canada, Winnipeg, MB, Canada; (3) Canadian Grain Commission, Winnipeg, MB, Canada; (4) Agriculture & Agri-Food Canada, Brandon, MB, Canada

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Quality characteristics of barley for its uses in various food products. B.-K. BAIK, B. Paszczynska, and S.E. Ullrich. Washington State University, Pullman, WA

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Retardation of dark discoloration in barley-based food products. Z. QUINDE and B.-K. Baik. Washington State University, Pullman, WA

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Sensory quality of chocolate chip cookies enriched with a high-soluble fiber barley flour. D.J. FROST (1), M. Botero Omary (1), E.M. Petersen (1), D.S. Lewis (1), E. Arndt (2), and K. Adhikari (1). (1) California State Polytechnic University, Pomona, CA; (2) ConAgra Foods, Omaha, NE

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Structural differences of the protein of Brazilian hull-less barley varieties in whole and fractionated flour samples. C.V. Helm, J.C. Raguzzoni, and A. DE FRANCISCO. Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil

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Structure and properties of barley endosperm cell walls. M.S. Izydoreczyk (1), A. Lazaridou (2), T. CHORNICK (1), and C.G. Biliaderis (3). (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) University of Manitoba, Winnipeg, MB, Canada; (3) Aristotle University, Thessaloniki, Greece

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Development and characterization of the cellular structure of sponge cakes. N. Lassoued (1), G. Della Valle (2), B. Launay (3), D. Lourdin (2), and C. MICHON (3). (1) CTCPA, Auch, France; (2) URPOI INRA, Nantes, France; (3) UMR SCALE, Massy, France

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Effect of alkali cooking on hard pretzel dough and final product. N. YAO and K. Seetharaman. Pennsylvania State University, University Park, PA

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Effects of soy protein inclusion in development of a reduced-carbohydrate hard pretzel. K. MANIRATH (1), A. Stark (2), and D. Karleskind (1). (1) Cargill, Inc., Wayzata, MN; (2) Cargill Food Applications Center, Cedar Rapids, IA

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Effects of waxy wheat flour blends on bread baking and staling properties. K. MATKOVIC (1), M. Chakraborty (1), L. Grant (2), S. Yalla (1), and F. Manthey (1). (1) North Dakota State University, Fargo, ND; (2) USDA-ARS, Fargo, ND

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Influences of baking and thawing conditions on quality of par-baked French bread. C.S. PARK, B. Paszczynska, and B.-K. Baik. Washington State University, Pullman, WA

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Omega-3 enrichment of white pan bread: A response surface methodology study. E.M. Kim, C.J. STEEL, and Y.K. Chang. UNICAMP, Campinas, SP, Brazil

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Use of corn syrups in pan breads. C. IPEK (1), M.H. Boyacioglu (1), D. Boyacioglu (1), and M.C. Tulbek (2). (1) Istanbul Technical University, Maslak-Istanbul, Turkey; (2) North Dakota State University, Fargo, ND

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Whole wheat bread preferences of children. O.M. LUKOW (1), J.-X. Guinard (2), and K.M. Adams (1). (1) Agriculture & Agri-Food Canada, Cereal Research Centre, Winnipeg, MB, Canada; (2) University of California, Davis, CA

## Breeding and Genetics

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Reduced amylose effects on bread and white salted noodle quality. J.M. Martin, L.E. Talbert, D. NASH, S.P. Lanning, J.D. Sherman, G. Carlson, and M.J. Giroux. Montana State University, Bozeman, MT

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## Carbohydrates

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An intermediate pressure-size-exclusion chromatography procedure for debranched amylopectin. S. MAGHAYDAH (1), A. Aboubacar (2), and B.R. Hamaker (1). (1) Purdue University, West Lafayette, IN; (2) University of Wisconsin, Menomonie, WI

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Baking functionality of a reduced-calorie flour replacer containing type-3 resistant starch. M. KWEON, L. Haynes, J. Locke, L. Slade, and H. Levine. Kraft Foods Inc., East Hanover, NJ

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Beta-glucan enriched yogurt: Effect of starter culture on beta-glucan viscosity. V.L. GEE, T. Vasanthan, and F. Temelli. University of Alberta, Edmonton, AB, Canada

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Composition and properties of A- and B-type starch granules of normal, partial waxy, and waxy wheat. B.L. GEERA (1), E. Souza (2), and K.C. Huber (1). (1) University of Idaho, Moscow, ID; (2) University of Idaho, Aberdeen, ID

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Effects of starch concentration and mineral oil on crystallite formation in jet-cooked cornstarch dispersions. F.C. FELKER, G.F. Fanta, R.L. Shogren, J.A. Byars, and J.H. Salch. USDA-ARS, Peoria, IL

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Effects of various processing factors on gelation of cereal beta-glucans. A. LAZARIDOU (1,2), M. Irakli (2), M.S. Izydorczyk (3), and C.G. Biliaderis (2). (1) University of Manitoba, Winnipeg, MB, Canada; (2) Aristotle University, Thessaloniki, Greece; (3) Canadian Grain Commission, Winnipeg, MB, Canada

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Improvement of chain-length determination of starch molecules by HPSEC-MALLS-RI system. H.-M. LIN (1), Y.-H. Chang (2), W.-B. Chou (2), and T.-J. Lu (1). (1) National Taiwan University, Taipei, Taiwan, ROC Republic of China; (2) Providence University, Shalu, Taiwan, ROC

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Nitrogen/protein determination in starch by combustion analysis. R.W. HANCOCK (1), A. Cadoppi (2), L. Krotz (2), L. Ragalia (2), and G. Giuzzi (2). (1) CE Elantech, Inc., Lakewood, NJ; (2) Thermo Electron, Madison, WI

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Physicochemical properties of pericarp and endosperm starches during maize development. L. LI (1), M. Blanco (2), and J. Jane (1). (1) Iowa State University, Ames, IA; (2) USDA-ARS, Iowa State University, Ames, IA

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Properties of whole and defatted oat bran concentrate and NutrimX. D.G. STEVENSON (1), F.J. Eller (1), M. Radosavljevic (2), and J.-L. Jane (3). (1) USDA-ARS, Peoria, IL; (2) Maize Research Institute, Belgrade, Yugoslavia; (3) Iowa State University, Ames, IA

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Proteomic comparison of surface proteins from four commercial wheat starch preparations. F.M. DUPONT, W. Vensel, W. Hurkman, R. Lopez, C. Tanaka, and D.D. Kasarda. USDA-ARS, Albany, CA

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The physicochemical properties of new products derived from acid-modified corn starches. Q. LIU (1), E. Weber (1), R. Yada (2), and M. Fan (2). (1) Agriculture & Agri-Food Canada, Guelph, ON, Canada; (2) University of Guelph, Guelph, ON, Canada

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The roles of starch fine structure on the physicochemical properties of corn starches revealed by chemical surface gelatinization. D. KUAKPETOON and Y.-J. Wang. University of Arkansas, Fayetteville, AR

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Use of isoamylase to explore the branching pattern of amylopectins. H. XIA and D.B. Thompson. Pennsylvania State University, University Park, PA

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Properties of tef [*Eragrostis tef* (Zucc.) Trotter] starch and potential applications. G. BULTOSA (1) and J.R.N. Taylor (2). (1) Alemaya University, Dire Dawa, Ethiopia; (2) University of Pretoria, Pretoria, South Africa

## Corn

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Construction and evaluation of a punch cell to measure hardness in individual nixtamalized corn kernels. M.H. IBARRA-MENDÍVIL (1), Y.T. Gallardo-Navarro (1), and B. Ramírez-Wong (2). (1) Instituto Politécnico Nacional, México, D.F., México; (2) Universidad de Sonora, Hermosillo, SON, México

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## Enzymes

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