VOLUME 67, NUMBER 1  JANUARY-FEBRUARY 1990

iii  Instructions to Authors

v  Acknowledgment of Reviewers


7  Effect of Lipids on the Retrogradation of Cooked Rice. Y. Hibi, S. Kitamura, and T. Kuge


14  Effects of pH, Sodium Chloride, Polysaccharides, and Surfactants on the Pasting Characteristics of Pea Flours (Pisum sativum). S. Lin, W. M. Breene, and J. S. Sargent

20  Factors Affecting Quality of Sorghum Tô, a Thick Porridge. A. B. Bello, L. W. Rooney, and R. D. Waniska

25  A Simplified Nonlinear Model for Describing the Viscoelastic Properties of Wheat Flour Doughs at High Shear Strain. B. Launay

32  α- and β-Setarins: Methionine-Rich Proteins of Italian Millet (Setaria italica (L.) Beauv.). A. P. Naren and T. K. Virupaksha


39  The Effect on Residual Flour Quality of Removing Farina During Common Wheat Milling. J. E. Dexter, K. R. Preston, R. H. Kilborn, and D. G. Martin


53  Effect of Laboratory Sprouting and Storage on Physicochemical and Breadmaking Properties of Hard Red Spring Wheat. T. Ariyama and K. Khan

59  Size-Distribution of Wheat Starch Granules During Endosperm Development. D. B. Bechtel, I. Zayas, L. Kaleikau, and Y. Pomeranz

64  A New Parameter Related to Loaf Volume Based on the First Derivative of the Alveograph Curve. K. Addo, D. R. Coahran, and Y. Pomeranz

73 Influence of Chemical and Physical Modification of Soft Wheat Protein on Sugar-Snap Cookie Dough Consistency, Cookie Size, and Hardness. C. S. Gaines

78 Factors Affecting the Viscosity of Flour-Water Extracts. A. M. Moore and R. C. Hoseney

81 Factors Affecting the Oxidative Gelation of Wheat Water-Solubles. A. M. Moore, I. Martinez-Muñoz, and R. C. Hoseney

85 Microflora of the Sourdoughs of Wheat Flour Bread. X. Interactions Between Yeasts and Lactic Acid Bacteria in Wheat Doughts and Their Effects on Bread Quality. M. A. Martinez-Anaya, B. Pitarch, P. Bayarri, and C. Benedito de Barber


97 NOTE: Effect of Cassava Flour Variety and Concentration on Bread Loaf Quality. A. M. Almazan

99 NOTE: Flour Fraction Interchange Studies of Effects of Chlorination on Cookie Flours. J. R. Donelson

101 NOTE: Testing Bread Slices in Tension Mode. A. Nussinovitch, I. Roy, and M. Peleg

104 NOTE: Use of Computer Vision for Real Time Estimation of Volume Increase During Microwave Baking. L. Levine, V. T. Huang, and I. Saguy

VOLUME 67, NUMBER 2 MARCH–APRIL 1990


111 Use of a Kramer Shear Cell to Measure Cracker Flour Quality. D. W. Creighton and R. C. Hoseney

114 Characteristics of Muffins Containing Various Levels of Waxy Rice Flour. F. C. S. Johnson

118 The Impact of Fissured Rice on Mill Yields. L. Velupillai and J. P. Pandey

124 Hydration of Whey Protein-Wheat Starch Systems as Measured by Electron Spin Resonance. P. A. Schanen, L. E. Pearce, E. A. Davis, and J. Gordon

129 Rice Cultivar Identification by High-Performance Liquid Chromatography of Endosperm Proteins. F. R. Huebner, J. A. Bietz, B. D. Webb, and B. O. Juliano
136 Effect of Sulfur Deficiency on the Synthesis of α-Setarin, a Methionine-Rich Protein of Italian Millet. A. P. Naren and T. K. Virupaksha


141 Analysis by Reversed-Phase High-Performance Liquid Chromatography of Changes in High Molecular Weight Subunit Composition of Wheat Storage Proteins During Germination. J. E. Kruger and B. A. Marchylo

148 Identification of a Unique Group of High Molecular Weight Proteins in Some Wheat Varieties. M. Kazemie and W. Bushuk


161 Use of Sonication and Size-Exclusion High-Performance Liquid Chromatography in the Study of Wheat Flour Proteins. II. Relative Quantity of Glutenin as a Measure of Breadmaking Quality. N. K. Singh, G. R. Donovan, and F. MacRitchie

170 Milling, Rheological, and End-Use Quality of Chinese and Canadian Spring Wheat Cultivars. O. M. Lukow, H. Zhang, and E. Czarnecki

176 Physical and Structural Properties of Wheat Endosperm Associated with Grain Texture. G. M. Glenn and R. M. Saunders


188 Texture Characteristics of Reheated Bread. D. E. Rogers, L. C. Doescher, and R. C. Hoseney

192 Grain Quality Characteristics of Export Rices in Selected Markets. B. O. Juliano, C. M. Perez, and M. Kaosa-Ard

197 Hard White and Red Winter Wheat Comparison in Hamburger Buns. C. E. Lang and C. E. Walker

202 Acetylated and Hydroxypropylated Distarch Phosphates from Waxy Barley: Paste Properties and Freeze-Thaw Stability. Y. Wu and P. A. Seib


213 NOTE: Fish Oil Added to Biscuits is a Potent Hypolipidemic Agent in Hypercholesterolemic Rats. G. S. Ranhotra, J. A. Gelroth, and K. Astroth
Enzyme-Resistant Starch. II. Differential Scanning Calorimetry Studies on Heat-Treated Starches and Enzyme-Resistant Starch Residues. D. Sievert and Y. Pomeranz


Enzymic Determination of β-Glucan in Cereal-Based Food Products. J. M. Carr, S. Glatter, J. L. Jeraci, and B. A. Lewis

Nutritive Quality of Blends of Corn with Germinated Cowpeas (Vigna unguiculata), Pigeon Pea (Cajanus cajan), and Bambarra Groundnut (Voandzeia subterranea). I. C. Obizoba


Lipid Binding of Modified Corn Starches Studied by Electron Spin Resonance. J. M. Johnson, E. A. Davis, and J. Gordon


Hardness of Moroccan Wheats. M. Bakhella, R. C. Hoseney, and G. L. Lookhart

Wheat Low Molecular Weight Glutenin Subunits—Structural Relationship to Other Gluten Proteins Analyzed Using Specific Antibodies. J. H. Skerritt and L. G. Robson

Study of Wheat Starch Granule Surface Proteins from Chlorinated Wheat Flours. M. Seguchi

Changing the Viscoelastic Properties of Cooked Rice Through Protein Disruption. B. R. Hamaker and V. K. Griffin

Polyacrylamide Gel Electrophoresis of Salt-Soluble Proteins of Soft Wheats from the Eastern United States. R. L. Clements

Starch Fragmentation and Protein Insolubilization During Twin-Screw Extrusion of Corn Meal. L.-F. Wen, P. Rodis, and B. P. Wasserman

Chemical and Technological Variables and Their Relationships: A Predictive Equation for Pasta Cooking Quality. M. G. D'Egidio, B. M. Mariani, S. Nardi, P. Novaro, and R. Cubadda

Proanthocyanidins in Wheat Bran. J. A. McCallum and J. R. L. Walker


Adjustment of Maize Quality Data for Moisture Content. C. Dorsey-Redding, C. R. Hurburgh, Jr., L. A. Johnson, and S. R. Fox
296 Measuring Trypsin Inhibitor in Soy Meal: Suggested Improvements in the Standard Method. C. E. Stauffer

303 Incorporation of Corn Fiber into Sugar Snap Cookies. W. E. Artz, C. C. Warren, A. E. Mohring, and R. Villota

305 NOTE: Sitostanyl Ferulate as an Indicator of Mechanical Damage to Corn Kernels. L. M. Seitz


VOLUME 67, NUMBER 4 JULY-AUGUST 1990

311 The Benefits of Basic Rheometry in Studying Dough Rheology. D. Weipert

317 Lipid Binding in Whey Protein-Wheat Starch Systems as Measured by Electron Spin Resonance. P. A. Schanen, L. E. Pearce, E. A. Davis, and J. Gordon


334 Effects of Selenium Fertilization on the Selenium Content of Cereal Grains, Flour, and Bread Produced in Finland. M. Eurola, P. Ekholm, M. Ylinen, P. Koivistoinen, and P. Varo


342 Relationships Between Protein Solubility Characteristics, 1BL/1RS, High Molecular Weight Glutenin Composition, and End-Use Quality in Winter Wheat Germ Plasm. R. A. Graybosch, C. J. Peterson, L. E. Hansen, and P. J. Mattern

350 Chemical Changes During Sponge-Dough Fermentation. K. Shiiba, Y. Negishi, K. Okada, and S. Nagao


366 Adsorption of Wheat Proteins on Wheat Starch Granules. A.-C. Eliasson and E. Tjerneld
Effect of Environment on Wheat Storage Proteins as Determined by Quantitative Reversed-Phase High-Performance Liquid Chromatography. B. A. Marchylo, J. E. Kruger, and D. W. Hatcher

Annealing of Maize Starches at Elevated Temperatures. C. A. Knutson

Physicochemical Studies of Pin-Milled and Air-Classified Dry Edible Bean Fractions. J.-Y. Han and K. Khan

Functional Properties of Pin-Milled and Air-Classified Dry Edible Bean Fractions. J.-Y. Han and K. Khan

Suitability of Reversed-Phase High-Performance Liquid Chromatographic Separation of Wheat Proteins for Long-Term Statistical Assessment of Breading Quality. M. G. Scanlon, P. K. W. Ng, D. E. Lawless, and W. Bushuk

The Effect of Water-Extracted Solubles from Gluten on Its Baking and Rheological Properties. P. C. Dreese and R. C. Hoseney

The Spaghetti-Making Quality of Commercial Durum Wheat Samples with Variable α-Amylase Activity. J. E. Dexter, R. R. Matsuo, and J. E. Kruger

Alkylresorcinols in U.S. and Canadian Wheats and Flours. P. Hengtrakul, K. Lorenz, and M. Mathias


Relation of Wheat Hardness to Air-Classification Yields and Flour Particle Size Distribution. Y. V. Wu, A. C. Stringfellow, and J. A. Bietz

Transformation of Wheat Flour by Extrusion Cooking: Influence of Screw Configuration and Operating Conditions. C. Barrès, B. Vergnes, J. Tayeb, and G. Della Valle

Water-Insoluble Pentosans of Wheat: Composition and Some Physical Properties. J. Michniewicz, C. G. Biliaderis, and W. Bushuk

Influence of Rice Bran, Oat Bran, and Wheat Bran on Cholesterol and Triglycerides in Hamsters. T. S. Kahlon, R. M. Saunders, F. I. Chow, M. M. Chieu, and A. A. Betschart

Description and Application of an Experimental Heat Sink Oven Equipped with a Loaf Height Tracker for the Measurement of Dough Expansion During Baking. R. H. Kilborn, K. R. Preston, and H. Kubota
Glass and Metal Pans for Use with Microwave- and Conventionally Heated Cakes. B. A. Baker, E. A. Davis, and J. Gordon

The Influence of Sugar and Emulsifier Type During Microwave and Conventional Heating of a Lean Formula Cake Batter. B. A. Baker, E. A. Davis, and J. Gordon


Quantitative Variation of Wheat Proteins from Grain at Different Stages of Maturity and from Different Spike Locations. F. R. Huebner, J. Kaczkowski, and J. A. Bietz


Detoxified and Debittered Jojoba Meal: Biological Evaluation and Physical-Chemical Characterization. L. A. Medina and A. Trejo-Gonzalez


Macromolecular and Functional Properties of Native and Extrusion-Cooked Corn Starch. R. Chinnaswamy and M. A. Hanna

Total and Soluble Fiber in Selected Bakery and Other Cereal Products. G. S. Ranhotra, J. A. Gelroth, and K. Astroth

High-Fructose Corn Syrup Cakes Made with All-Purpose Flour or Cake Flour. J. T. Marx, B. D. Marx, and J. M. Johnson

Study of Iron Bioavailability in a Native Nigerian Grain Amaranth Cereal for Young Children, Using a Rat Model. P. Whittaker and M. O. Ologunde

NOTE: Relative Lipidemic Responses in Rats Fed Oat Bran or Oat Bran Concentrate. G. S. Ranhotra, J. A. Gelroth, K. Astroth, and C. S. Rao

515 Changes in Selected Nutrient Contents and in Protein Quality of Common and Quality-Protein Maize During Rural Tortilla Preparation. R. Bressani, V. Benavides, E. Acevedo, and M. A. Ortiz

519 Effect of Germination on the Chemical Composition and Nutritive Value of Amaranth Grain. A. S. Colmenares de Ruiz and R. Bressani

523 Effects of Hardness and Drying Air Temperature on Breakage Susceptibility and Dry-Milling Characteristics of Yellow Dent Corn. A. W. Kirleis and R. L. Stroshine


533 Nutritional Improvement of Tannin-Containing Sorghums (Sorghum bicolor) by Sodium Bicarbonate. D. B. C. Banda-Nyirenda and P. Vohra


545 Effects of Wheat Bran and Polydextrose on the Sensory Characteristics of Biscuits. P. Stanyon and C. Costello

548 Sieving Effects on Breakage Susceptibility Measurements. F. L. Herum, N. D. Schmidt, and E. L. McCoy


558 Swelling and Gelatinization of Cereal Starches. II. Waxy Rice Starches. R. F. Tester and W. R. Morrison


575 The Dynamics of Cake Baking as Studied by a Combination of Viscometry and Electrical Resistance Oven Heating. K. Shelke, J. M. Faubion, and R. C. Hoseney

580 Nuclear Magnetic Resonance Imaging of Transient Three-Dimensional Moisture Distribution in an Ear of Corn During Drying. H. Song and J. B. Litchfield
585 Evaluation of Corn Distillers' Dried Grains Defatted with Supercritical Carbon Dioxide. Y. V. Wu, J. P. Friedrich, and K. Warner


594 Thermal Behavior During Gelatinization and Amylopectin Fine Structure for Selected Maize Genotypes as Expressed in Four Inbred Lines. E. B. Sanders, D. B. Thompson, and C. D. Boyer

603 NOTE: Changes in Bread Firmness and Moisture During Long-Term Storage. H. He and R. C. Hoseney

607 Cereal Chemistry Editors and Staff

608 Author Index, Volume 67

611 Subject Index, Volume 67

615 Contents Index, Volume 67