

SEPTEMBER-OCTOBER 2009  
VOLUME 86, NUMBER 5

# CEREAL CHEMISTRY®

AN INTERNATIONAL JOURNAL SINCE 1924

ITI Extensión y Desarrollo  
División Biblioteca  
0635  
16 OCT 2009



Editor-in-Chief  
R. C. Hoseney

Senior Editors  
J. A. Delcour  
M. S. Izydorczyk

Board of Editors

B.-K. Baik	P. Koehler
I. Batey	M. Kweon
B. S. Beecher	B. Lamsal
M. E. Camire	R. Miller
E. Champagne	K. D. Rausch
P. Chinachoti	A. S. Ross
F. W. Collins	Y.-C. Shi
C. M. Courtin	S. Saldivar
S. R. Delwiche	K. Spence
N. M. Edwards	J. R. N. Taylor
J. Faubion	Y.-J. Wang
G. Ganjyal	P. L. Weegels
W. Hung	R. W. Welch



EDITORIAL POLICY

CEREAL CHEMISTRY® is an international journal publishing high-quality, scientific papers reporting significant, recent research. Acceptable research areas include those dealing with biochemistry, biotechnology, products, processes, and analytical procedures associated with cereals and other grain crops. Papers may be comprehensive reviews or reports of original investigations that make a definite contribution to existing knowledge. The content must not have been published or accepted for publication elsewhere, and papers must not be under consideration by another journal.

Paid advertisements are accepted. However, no endorsement or any statement of claims made in advertisements is assumed by this journal or by AACC International, Inc.

The current processing fees for CEREAL CHEMISTRY are \$300 (for the first five pages) and \$120 each page, or portion thereof, thereafter for members of AACC International, Inc. and \$400 (for the first five pages) and \$150 each page, or portion thereof, thereafter for nonmembers. All fees are subject to change without notice. Reprints are available to authors at a nominal cost; an order form will be provided and must be returned with the proof. A list of recently accepted manuscripts appears online (<http://cerealchemistry.aaccnet.org/>). For further information on recently accepted manuscripts, contact the Editorial Office.

Direct inquiries on editorial policy and review process to: Dr. R. Carl Hoseney, Editor-in-Chief, 852 Church Ave, Manhattan, KS 66502 U.S.A. (Phone: +1.785.537.5199; Fax: +1.785.537.5199; E-mail: [hoseney@scisoc.org](mailto:hoseney@scisoc.org)). Submit manuscripts directly to "Manuscript Central". Further information is provided in the "Instructions to Authors" online (<http://cerealchemistry.aaccnet.org/>). Direct inquiries to: **Editorial Office, AACC International, Inc., 3340 Pilot Knob Rd., St. Paul, MN 55121.**

# CEREAL CHEMISTRY®

AN INTERNATIONAL JOURNAL SINCE 1924

VOLUME 86, NUMBER 5

September-October 2009

- 487 Characterization of Kafirins in Algerian Sorghum Cultivars. *H. Mokrane, B. Lagrain, K. Gebruers, C. M. Courtin, K. Brijs, P. Proost, and J. A. Delcour*
- 492 Addressing the Dilemmas of Measuring Amylose in Rice. *M. A. Fitzgerald, C. J. Bergman, A. P. Resurreccion, J. Möller, R. Jimenez, R. F. Reinke, M. Martin, P. Blanco, F. Molina, M.-H. Chen, V. Kuri, M. V. Romero, F. Habibi, T. Umemoto, S. Jongdee, E. Graterol, K. R. Reddy, P. Z. Bassinello, R. Sivakami, N.S. Rani, S. Das, Y. J. Wang, S. D. Indrasari, A. Ramli, R. Ahmad, S. S. Dipti, L. Xie, N. T. Lang, P. Singh, D. C. Toro, F. Tavasoli, C. Mestres*
- 499 Tocopherol and Tocotrienol Content in Commercial Wheat Mill Streams. *M. M. Engelsen and Å. Hansen*
- 503 Characterization of Resistant Starch Samples Prepared from Two High-Amylose Maize Starches Through Debranching and Heat Treatments. *S. Ozturk, H. Koxsel, and P. K. W. Ng*
- 511 Impact of Baking on Vitamin E Content of Pseudocereals Amaranth, Quinoa, and Buckwheat. *L. Alvarez-Jubete, M. Holse, Å. Hansen, E. K. Arendt, and E. Gallagher*
- 516 Effect of Temperature and Steeping Time on Calcium and Phosphorus Content in Nixtamalized Corn Flours Obtained by Traditional Nixtamalization Process. *I. Rojas-Molina, E. Gutiérrez, A. Rojas, M. Cortés-Álvarez, L. Campos-Solís, M. Hernández-Urbíola, J. L. Arjona, A. Cornejo, and M. E. Rodríguez-García*
- 522 Potential Utilization of Mixolab for Quality Evaluation of Bread Wheat Genotypes. *H. Koxsel, K. Kahraman, T. Sanal, D. S. Ozay, and A. Dubat*
- 527 Automated Single-Kernel Sorting to Select for Quality Traits in Wheat Breeding Lines. *F. E. Dowell, E. B. Maghirang, and P. S. Baenziger*
- 534 Influence of Sulfur and Nitrogen Content of Rice Grains on Flavor in Stored Sake. *M. Okuda, A. Isogai, M. Joyo, N. Goto-Yamamoto, and S. Mikami*
- 542 Cooking and Textural Properties of Some Traditional and Aromatic Rice Cultivars. *M. Lucisano, M. Mariotti, M. A. Pagani, G. Bottega, and L. Fongaro*
- 549 Effect of Storage Temperature for Paddy on Consumer Perception of Cooked Rice. *E.-H. Jang, S.-T. Lim, and S.-S. Kim*

*Publisher*  
Steven C. Nelson

*Director of Publications, Production*  
Karen Cummings

*Technical Editor*  
Phyllis Albertz

*Production Supervisor*  
Patti Ek

*Journals Records Coordinator*  
Ina Pfefer

*Circulation Coordinator*  
Dawn Wuest

Authorization to photocopy copyrighted material for internal or personal use, or the internal or personal use of specific clients, is granted by AACC International, Inc., for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$7.00 for per copy of an article is paid directly to CCC, 222 Rosewood Dr., Danvers, MA 01923. Phone: 978-750-8400. 0009-0352/09 \$7.00 + 00

**2010 Print Subscriptions:** Number of issues per year: 6 (bimonthly). Cost: \$667 U.S.A.; \$712 Elsewhere; Canadian subscribers add 5% GST/HST (Canadian GST #R131584807). Shipping included in yearly subscription rate. No agency discount available.

**CURRENT print + ONLINE subscribers:** Renewal invoices for 2010 will be mailed with online pricing.

**NEW print + ONLINE subscribers:** Online access can be added to your *Cereal Chemistry* print subscription for an additional fee. Fill out price quote form at <http://cerealchemistry.aaccnet.org/page/subscribe>. For terms of use for *Cereal Chemistry* journal online, go to <http://cerealchemistry.aaccnet.org/page/librarians.jsp>

**Single Issue Purchases:** Current volume year cost: \$117/issue U.S.A.; \$128/issue elsewhere. Other years: \$124/issue U.S.A.; \$135/issue elsewhere.

**Single Article Purchases:** PDF copies of articles published from 1997 to present may be purchased online. Go to <http://cerealchemistry.aaccnet.org/loi/cchem>, locate the article, and then click the PDF link.

**Payment Information:** Prepayment is required. AACC International accepts check payments. Checks must be drawn on U.S. Federal Reserve System Bank. AACC International accepts credit card payments (MasterCard, American Express, and VISA).

**Change of Subscription Address:** Provide your current mailing label to AACC International U.S.A. Headquarters with forwarding address information 6 weeks before the change.

**Business Offices: AACC International Headquarters,** 3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A.; Phone +1.651.454.7250, 1.800.328.7560; Fax +1.651.454.0766; E-mail: [aacc@scisoc.org](mailto:aacc@scisoc.org)

**CEREAL CHEMISTRY®** (ISSN: 0009-0352) is published bimonthly by AACC International, Inc., 3340 Pilot Knob Road, St. Paul, MN 55121. Phone: +1.651.454.7250. Periodicals postage paid at St. Paul, MN, and additional mailing offices. **Postmaster: Send address changes to Cereal Chemistry, 3340 Pilot Knob Road, St. Paul, MN 55121.**

- 556** High-Throughput Near-Infrared Reflectance Spectroscopy for Predicting Quantitative and Qualitative Composition Phenotypes of Individual Maize Kernels. *G. Spielbauer, P. Armstrong, J. W. Baier, W. B. Allen, K. Richardson, B. Shen, and A. M. Settles*
- 565** Sensory Evaluation of Barley Chocolate Chip Cookies by Consumers with Different Demographic Background and Eating Patterns. *M. B. Omary, K. A. Rosentrater, D. S. Lewis, E. Arndt, D. J. Frost, and L. M. Winstone*
- 575** Qualitative Zymographic Studies of Major Proteinases from Malted Sorghum (*Sorghum bicolor* L.) and Effects of Cultivar. *G. Mokhawa, M. P. Ralefala, B. B. Bulawayo, and L. I. Ezeogu*
- 582** A Modified Extensigraph Method for Evaluating Dough Properties of Hard Wheat Breeding Lines. *R. Y. Chen, B. W. Seabourn, F. Xie, and T. J. Herald*
- 590** Phenolic Content, Antioxidant Activity, and Consumer Acceptability of Sorghum Cookies. *C. Chiremba, J. R. N. Taylor, and K. G. Duodu*