News

AACC International Analytical Accuracy Award Recipients for 2016 Announced

The recipients of AACC International's Analytical Accuracy Awards, based on 2016 check sample results, have been announced. This is the 18th year of the AACC International Analytical Accuracy Awards. Awardees receive a certificate suitable for posting and are listed on the AACCI website.

All subscribers to the AACCI check sample program series who include a proficiency rating option are eligible. Subscription to the proficiency program is not required but is highly recommended. To be eligible for an award, laboratories must have met all the requirements for results submission in the award year.

The award in each series is presented to the laboratory submitting the most accurate analyses (the accuracy score). The accuracy score is determined using the same statistical procedures used to evaluate the proficiency ratings. The required analyses in each check sample series are considered first. In addition, to encourage subscribers to include the results of optional analyses in their reports, these results are included if they improve the accuracy score.

Formal entry for the award competition is not necessary—all check sample subscribers in a given check sample series are automatically entered if they have submitted the required results on all samples for the award year.

The accuracy award results relate to the performance of the awardee's analyst or laboratory and not that of other analysts and laboratories who may be equally qualified.

For more information about the AACC International Check Sample and Proficiency Rating Service visit www.aaccnet.org.

Check Sample A—Hard Wheat Flour, Monthly
Panhandle Milling, Dawn, TX, U.S.A.

Check Sample B—Hard Wheat Flour, Bimonthly
Nippon Flour Mills, Atsugi, Kana, Japan

Check Sample C—Soft Wheat Flour
Nisshin Flour Milling Inc., Tokyo, Japan

Check Sample D—Feed Analyses
Analytical Feed and Food, Visalia, CA, U.S.A.

Check Sample DF—Dietary Fiber
Deibel Laboratories, Lincolnwood, IL, U.S.A.

Check Sample HL—Farinograph
P&H Milling Group–Cambridge, ON, Canada

Check Sample HS—Farinograph
Snavely's Mill Inc., Lititz, PA, U.S.A.

Check Sample I—Amylograph
Canadian Grain Commission, Winnipeg, MB, Canada
The Mennel Milling Co., Fostoria, OH, U.S.A.

Check Sample J—Mixograph
Southern African Grain Laboratory NPC, Pretoria, South Africa

Check Sample MBA—Microbiological Analyses (Including Pathogens)
Grain Processing Corp., Muscatine, IA, U.S.A.

Check Sample SA—HPLC Sugar Analysis
Eurofins Food & Agro Sweden AB, Lidköping, Sweden

Check Sample VMP—Vitamin Analyses
Merieux NutriSciences, Markham, ON, Canada

Check Sample VMP—Mineral Analyses
Merieux NutriSciences, Markham, ON, Canada

Check Sample VMP—Proximate and Vitamin Analyses
General Mills Inc., Minneapolis, MN, U.S.A.

Check Sample VMP—Proximate and Mineral Analyses
Eurofins Food & Agro Sweden AB, Lidköping, Sweden

Have You Read These Open-Access Articles in *Cereal Chemistry*?

As a premier journal of grain science research, *Cereal Chemistry* offers a wide and robust array of research for food scientists in both industry and academia. The open-access articles featured below are representative of the novel and significant scientific information we provide for readers.

Estimation of the Deoxynivalenol and Moisture Contents of Bulk Wheat Grain Samples by FT-NIR Spectroscopy

Deoxynivalenol (DON) levels in harvested grain samples are used to evaluate the Fusarium head blight (FHB) resistance of wheat cultivars and breeding lines. Fourier transform near-infrared (FT-NIR) calibrations were developed to estimate the DON level and moisture content (MC) of bulk wheat grain samples harvested from FHB screening trials. Grains in a rotating glass petri dish were scanned in the 10,000–4,000 cm^{-1} (1,000–2,500 nm) spectral range using a Perkin Elmer Spectrum 400 FT-IR/FT-NIR spectrometer. The DON calibration predicted the DON levels in test samples with $R^2 = 0.62$ and root mean square error of prediction (RMSEP) = 8.01 ppm. When 5–25 ppm DON was used as the cut-off to classify samples into low- and high-DON groups, 60.8–82.3% of the low-DON samples were correctly classified, whereas the classification accuracy of the high-DON group was 82.3–94.0%. The MC calibration predicted the MC in grain samples with $R^2 = 0.98$ and RMSEP = 0.19%. Therefore, these FT-NIR calibrations can be used to rapidly prescreen wheat lines and identify low-DON lines for further evaluation using standard laboratory methods, thereby reducing the time and costs of analyzing samples from FHB screening trials.

View this article at aaccipublications.aaccnet.org/doi/full/10.1094/CCHEM-11-16-0271-R

Definition of the "Purity Protocol" for Producing Gluten-Free Oats

Several oat processors in the United States and Canada operate under what is referred to as a "purity protocol" for the provision of gluten-free oats. This term is derived from a Health Canada position statement that indicates that pure oats, which they define as oats that are harvested, transported, stored, processed, and manufactured under good manufacturing practices (GMPs) to minimize the presence of gluten, can safely be consumed by some persons with celiac disease. While proprietary definitions of the appropriate GMPs have been used in industry for many years, no independent definition of the requirements to make a purity protocol claim has been published. This paper provides a consensus definition of the purity protocol requirements based on input from the four largest purity protocol oat processors in North America. This definition provides transparency for consumers seeking gluten-free products and allows for auditing of a purity protocol claim.

View this article at aaccipublications.aaccnet.org/doi/full/10.1094/CCHEM-01-17-0017-VO

Changes in the Phenolic Acid Content and Antioxidant Activity during Kernel Development of Corn (*Zea mays* L.) and Relationship with Mycotoxin Contamination

Corn grain production could be affected by several fungal pathogens responsible for the production of mycotoxins. The aims of this study were to determine the evolution of phenolic acids and total antioxidant activity (TAA) during kernel development and to evaluate their potential protective role in minimizing mycotoxin contamination in six corn genotypes (four open-pollinated varieties and two hybrids) characterized by a wide array of kernel traits. TAA and free and cell wall-bound phenolics showed significant differences among corn genotypes at different stages of development, with the highest values found at the beginning of kernel development. Ferulic, p-coumaric, and caffeic acids were the main cell wall-bound phenolic acids during kernel development, whereas chlorogenic acid was the main free phenolic acid. A significant negative correlation was observed between deoxynivalenol contamination at harvest maturity and free phenolic acids and TAA at the beginning of kernel development, whereas no significant correlation was observed with fumonisin contamination. In conclusion, free phenolic acids are evidently involved in the resistance mechanism toward deoxynivalenol contamination, whereas their role toward fumonisin contamination was not elucidated under field conditions, implying that components other than phenolic acids may be responsible for this latter type of resistance.

View this article at aaccipublications.aaccnet.org/doi/full/10.1094/CCHEM-05-16-0155-R

New Members

Argüelles López, O. D., graduate student, Programa de Posgrado en Ciencia y Tecnología de Alimentos, FCQB-UAS, Culiacán Rosales, Sinaloa, Mexico

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Heflich, L., Innovation for Success, LLC, Doylestown, PA, U.S.A.

Hinds, J., R&D manager, Cain Food Industries Inc., Dallas, TX, U.S.A.

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Xu, Y., University of Helsinki, Helsinki, Finland
Yuan, T. Z., research assistant, University of Saskatchewan, Saskatoon, SK, Canada
Zhu, F., University of Auckland, Auckland, New Zealand
Zvaners, R., American Bakers Association, Washington, DC, U.S.A.

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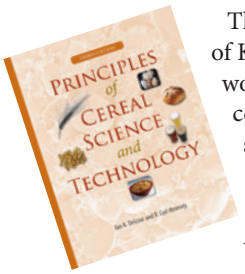

Thanks to the generous corporate support of Kellogg's, university food science classes worldwide can now receive free online access to one of the world's premier cereal science textbooks: *Principles of Cereal Science and Technology, Third Edition*. The desired outcomes of this important AACCI outreach project are to

- Increase the number of food science courses that teach cereal science
- Attract a larger, high-quality pool of scientists and professionals to the grains industry
- Help ensure food security in developing nations

We encourage participation by professors of various undergraduate- and graduate-level university programs, including those teaching basic cereal chemistry, cereals utilization, agricultural science, crop quality, process engineering and technology, and other topics in the grain-food sciences.

Professors who include at least one chapter of this textbook in their lesson plans can obtain free online access to this textbook for their entire class. To participate, simply download, fill out, and e-mail the online form available at AACCPress@scisoc.org.

Companies wishing to join Kellogg's in support of this important effort should contact Phil Bogdan, AACCI staff, at pbogdan@scisoc.org or +1.651.994.3859.

Advertisers' Index

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Important AACCI Dates

September 2017

12. Cereals 17 housing deadline

20–22. AACCI hosted: AGSA Conference session, Christchurch, New Zealand

24–28. AACCI supported: Food Extrusion: Cereals, Protein & Other Ingredients Short Course, Texas A&M, College Station, TX, U.S.A.

October 2017

8–11. Cereals 17: AACCI Annual Meeting, San Diego, CA, U.S.A.

For more information visit
aaccnet.org

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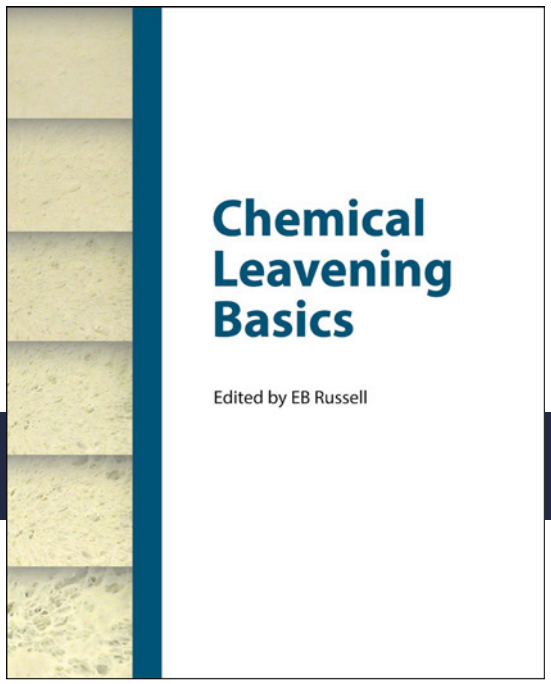

Chemical Leavening Basics is a concise, easy to use reference to help readers understand chemical leavening, its components and uses in commercial food processing today, assessments in products, and methods for testing.

Produced by the AACC International Chemical Leavening Agents Technical Committee, this technical guidebook helps food professionals understand each of the individual components used in baking powder, why to use them, where to use them, when to use them, and their importance.

Chemical Leavening Basics will become the go-to reference for product developers, bakers, ingredient suppliers, technical service production personnel, quality assurance staff, mix manufacturers, or anyone else using baking powders or chemical leaveners.

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KEYNOTES

OPENING GENERAL SESSION

EQ+IQ = The Winning Formula for Digestible Science

Linda Eatherton
Managing Director and Partner, Ketchum Global Food & Beverage Practice

CLOSING GENERAL SESSION

3D Printed Foods: Innovations in Military Field Feeding Technology

Lauren E. Oleksyk
Team Leader, Food Engineering and Analysis Team, Combat Feeding Directorate, US Army Natick Soldier Research, Development and Engineering Center (NSRDEC)

Get ALL the Latest Updates for Cereals 17. Follow AACCI!

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