Second International Cake Symposium Held in Boston

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After the success of the first international Cake Symposium held in Leuven (Belgium) in 2012, the second international Cake Symposium (www.cakesymposium.org) was organized and took place August 25–26, 2014, in Boston, MA. The event was hosted by KU Leuven (Belgium) and UMass Amherst (United States) and sponsored by Puratos (www.puratos.com) and AACC International (www.aaccnnet.org). Attendees (103 in total) from 8 countries (Belgium, Brazil, Canada, Japan, Mexico, Sweden, The Netherlands, and the United States) participated in this two day event covering different aspects of cake systems. Although cakes are very complex systems and have gained economic importance worldwide, not much is known about either ingredient functionality in cake systems or the chemical and physical processes that take place during cake making. Internationally recognized scientists with expertise in the complex world of cake making were invited to share their views and findings on different aspects of cake systems.

The program for the first day focused on the functionality of different ingredients in cake systems. The symposium was officially opened by Organizing Committee Co-chairs Kristof Brijs (KU Leuven) and Amanda Kinchla (UMass Amherst).

R. Carl Hoseney (Kansas State University, United States) gave a detailed overview of the different classification systems for cakes, ingredient functionality, and the importance of batter viscosity for cake quality.

Wheat flour constituents have several functions in cake making. Jan Delcour (KU Leuven) described the composition and specifications of wheat flour and their importance for cake making. Geertrui Bosmans (KU Leuven) further focused on the role of wheat starch and protein in different cake-making steps. Andrew Ross (Oregon State University, United States) spoke about the need to select genotypes for traits associated with superior cake-making potential in soft wheat breeding programs. Deana Jones (U.S. Department of Agriculture, Agricultural Research Service) discussed the functionality of eggs in food formulations, and Iris Joye (UMass Amherst and KU Leuven) applied basic emulsion principles to complex cake batter systems. Louise Slade (Food Polymer Science Consultancy, United States) elaborated on the properties and functionality of sugar in cakes. During the last session of the day, the importance of leavening agents and the impact of fiber addition in cake systems were discussed by Sharon L. Book (ICL Performance Products LP, United States) and Mukti Singh (U.S. Department of Agriculture, Agricultural Research Service), respectively.

The program for the second day included presentations selected from submitted abstracts and covered a wide range of topics. The first session was kick-started by doctoral student Cansu Gumus (UMass Amherst). She summarized current theories on lipid oxidation in low-moisture foods to provide the groundwork for new lipid oxidation rate-reduction strategies.

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and more effective antioxidant technologies. Martin Scanlon (University of Manitoba, Canada) showed the importance of aerated system dynamics in cake quality. Doctoral student Tim Van Dyck (KU Leuven) combined constitutive material models to explore the structure–property relationships of bread crumb and cake.

In the second session, doctoral student Lomme Deleu (KU Leuven) presented interesting data on protein network formation during pound cake making using 15N-labeling of egg proteins. Steven Baker (TIC Gums, United States) discussed the potential of gums for cake system applications, whereas Barbara Heidolph (Innophos, United States) described recent developments in gluten-free cake processing. After the lunch break, Tim Van Dyck discussed the influence of ingredients on the rheology of cake batter and texture and microstructure of cake. Celeste Sullivan (Grain Processing Corporation, United States) closed the technical sessions with a talk on the effect of modified food starch on the shelf life and freezer stability of frozen cakes and baked goods.

The closing session featured Frank Devos and Chuck Galliher (Puratos, United States). In a joint presentation, they introduced innovation trends in cakes, taking into account consumer trends and adapting cakes to local markets. Last but not least, Jan Delcour closed the symposium by reflecting on the different views explored during the two day event and giving his thoughts on challenges in research on cake systems.