

AMERICAN ASSOCIATION OF CANDY TECHNOLOGISTS

MONDAY, OCTOBER 7, 2024

- 1:00 PM **Optional Chocolate Tempering Demonstration**
(must select demo option when registering)
- 5:30 PM **First-timers and Under-30 Reception**
- 6:00 PM **Opening Reception** (until 8:00 PM)

TUESDAY, OCTOBER 8, 2024

- 8:30 AM — 4:30 PM **Presentations**
- 4:30 PM **Supplier Exhibits & Reception** (until 6:30 PM)
- 6:45 PM **Stroud Jordan Award Banquet**

WEDNESDAY, OCTOBER 9, 2024

- 8:30 AM — 4:30 PM **Presentations and Round Table Discussions**
- 4:30 PM **Iron Confectioner Competition**
- 6:15 PM **Dinner**

PRESENTATION ABSTRACTS

Overcoming Moisture Challenges in Candy and Confections Zachary Cartwright, PhD, *Aqualab by Addium*

Many candies and confectionery products have distinctive textures and flavors that come together to form a unique customer experience. Since water plays a critical role in texture and taste, using the right measurements and understanding their implications is critical to avoiding unwanted phase transitions and moisture migration while preserving desired flavor attributes. Additionally, shelf-life can be quickly predicted and packaging can be optimized to create and maintain consistent, high quality products. This presentation will review how to use moisture, water activity, and sorption isotherms to overcome key challenges in the production of candy and confections.

Sugar Boiling 101

Tim Grady, *Food Ingredients Inc.*

Boiling sugar is the basis of a large swath of the confectionary industry, and is the first step in manufacturing many sugar based candies. This lecture will cover glass transition temperature, the relationship between boiling temperature and water content, and the effects of post-cook processing and special ingredient inclusions to alter the candy texture, functionality, and flavor.

Chocolate Viscosity: Sciences, Practices, and Methods Linsen Liu, PhD, *Guittard Chocolate Company*

Viscosity stands as a paramount characteristic in chocolates and confectionery products. It impacts the processing, transportation, applications, and sensory of those products; therefore, its measurement and accuracy are vital for the chocolate making and processing. In North America, the viscosity is widely measured using Brookfield viscometer based on the NCA/MCA method. This presentation reviews the scientific principles of the Brookfield viscometer and best practices for chocolate viscosity measurement and provides recommendations on improving the NCA/MCA official method.

NCA Regulatory Update

Farida Mohamedshah, *NCA*

This annual update from NCA will address regulatory news, changes and outlook across the confectionery industry.

Natural Colors in Confections

Patrick Troutman, *IFC Solutions*

Now more than ever, confectioners are being asked to implement naturally derived colors and ingredients as consumer demand continues to look for clean labeling on products they purchase. The regulatory landscape is also changing as California has passed legislation to restrict use of FD&C Red 3 in the state. More states have either introduced similar legislation or are expected to do so in the near future. The use of natural colorants poses many challenges in comparison to certified colors which are still widely used in the confection industry. This presentation will give an overview and practical guide for naturally derived coloring options available to confectioners for use in their applications and what characteristics determine which colors are more suitable based on the finished product and processing parameters.

Sweet Emotions: Infusing Delight with a Sprinkle of AI Vinay Indraganti, *BCD iLabs*

"How Sweet it is: Unwrapping the Future with AI Formulation in Confectionary Delights," this seminar delves into the transformative role of artificial intelligence (AI) in the confectionary industry. Attendees will explore how AI algorithms are reshaping traditional approaches to product development, focusing on the integration of AI formulation methods. Through discussions, case studies, and expert insights, participants will uncover the ways in which AI is optimizing confectionery formulations. By examining the challenges and opportunities inherent in this technological shift, the seminar aims to illuminate the path toward a more innovative and efficient future for confectionery delights.

Considerations for Use of Confections in Ice Cream & Frozen Desserts

Liz Miller, *Denali Ingredients*

Confections and ice cream are undoubtedly two of the tastiest product categories on the market. The only thing more delicious? Combining them! We will go over some of the many ways that confections can be highlighted in frozen desserts as well as considerations to ensure the confections stand up to the environmental challenges of the freezer aisle. Topics of discussion will include melt point of fat-based confections, moisture migration and textural impacts of the temperature and microclimate within frozen desserts. Also covered will be tips and tricks of how confections optimized for ice cream applications should be handled.

Reformulating Sucrose out of Bittersweet Chocolate

Mackenzie Hansen, *Tate & Lyle*

Consumer interest in health & wellbeing has driven demand for healthier chocolate products that retain a desirable eating quality. Some producers aim to address this through sugar and carbohydrate reduction, placing pressure on ingredient suppliers to provide better-for-you bulking options to customers. This presentation will explore learnings from our recent investigations into the physico-chemical and sensory texture consequences of reformulating sucrose (used at 48.08% w/w) out of bittersweet chocolate matrices. We will present results from our evaluations of several bulking solutions including polyols (erythritol, xylitol, and maltitol), soluble fibers (resistant maltodextrins, polydextrose, and fructooligosaccharides), and rare sugars (allulose), comparing their suitability to replace sucrose in bittersweet chocolate and compound coating applications when used at high levels between 25 and 48% w/w. Results indicated that amorphous bulking ingredients produced compound coatings with higher moisture than crystalline ingredients, enhancing melted viscosities. It was also observed that amorphous ingredients with hollow, spherical particle morphologies with thin shells tended to refine to the desired particle size range more easily, forming products with smoother mouthfeel that more closely resembled Reference sugar chocolate.

Quality Chocolate Confections with Cocoa Butter Equivalents

Bob Johnson, *Fuji Vegetable Oil, Inc.*

Cocoa butter equivalents, or CBE's were first introduced to the chocolate industry more than 50 years ago. Since that time, they have achieved broad global use as a means of mitigating volatile cocoa butter costs as well as providing improved stability in tempered chocolates and confections. Having comparable triglyceride profiles to cocoa butter, CBE's are fully compatible with cocoa butter and can be substituted for all or part of the cocoa butter in a formula and can be run on the same production lines as chocolate with minimal modification of conditions.

The rate of adoption and the level of use of CBE's in confectionery has varied globally and has been driven in part by economics, climate and labeling requirements. With volatility in cocoa production creating increased economic and availability risk, the demand for CBE's is increasing and resulting in broader application of them in high quality confections. This presentation will briefly address the benefits that CBE's offer to confectioners and some of the considerations in formulating, producing and marketing confections utilizing CBE's.

Vegan Chocolates: Opportunities for Better Taste, Better Planet Sudarshan Nadathur, *ADM*

The long-beloved category of chocolate is evolving due to shifts in consumer needs and motivations as well as shifts in climate patterns. With more demand for vegan, reduced sugar and more sustainable options, new formulations showcase non-dairy proteins, alternative sweeteners and ingredients that can alter the taste and consumer preference of the product. This presentation will discuss approaches to modulate and optimize taste - to not only enable consumer acceptance of new formulations but spark surprise and delight for the taste experience.

The Sweetest Collaboration: How 3 Generations are Shaping Candy's Future

Tom Houlihan, *Guittard Chocolate Company*
Carly Meck, *Blommer Chocolate Company*
McKenna Helder, *University of Wisconsin - Madison*

Join this interactive session featuring candy professionals from three distinct generations! Gain insights and advice on navigating your career in the candy industry. Whether you're a seasoned expert, a rising star, or just starting out, this panel discussion offers valuable perspectives on evolving trends and challenges in candy technology, building relationships and fostering collaboration across generations, and finding your niche and achieving your goals in the candy world

Nutritional Labeling 101

Megan Murphy, *Trustwell/Genesis*
Abstract to come.

Panning: Hair Dryers to Psychometric Charts

Jeff Bogusz, *Lucky Teapot Consulting*
Abstract to come.

Innovations/Trends in Chocolate as an Ingredient

Heather Houston & Rebecca Kuehn, *Guittard Chocolate Co.*
Abstract to come.

Evaluating Chocolate Temper

Tom Allen, *Tricolor Systems, Inc.*
Abstract to come.

Preventing and Mitigating Bloom

Audrey Lidhard, *Utah State University*
Abstract to come.

ROUND TABLE TOPICS

- Topics to be announced

SEMINAR REGISTRATION

Registration Fees	Aug. 12 or before	After Aug. 12
Regular Registration fee	\$690	\$740
National Chapter Member <i>reduced</i> fee	\$580	\$630
Student fee (accredited, post secondary)	\$200	\$250
Supplier Table	\$315	\$415
Optional Demo	\$50	\$75

NO REFUNDS will be allowed after August 12, 2024. Registrations cancelled prior to August 12th will be refunded the full amount paid, minus a \$50 administrative fee.

Seminar registration can be made online: www.aactcandy.org

Hotel reservations must be made directly with the Hyatt Lodge, 2815 Jorie Blvd, Oak Brook, IL 60523, Phone: +1 (630) 568 1234. To receive the reduced group rate, mention AACT/American Association of Candy Technologists when calling or use the direct link <https://www.hyatt.com/en-US/group-booking/CHILO/G-AAC4> for online reservations. Reduced rate rooms are not guaranteed after September 18th. Regular rates apply to available rooms booked after that date.

An optional chocolate tempering demonstration will take place at the hotel on Monday afternoon, beginning at 1:00pm. Experts will demonstrate techniques and best practices, giving participants practical tips to take with them. The session will include time for participant Q&A.

Supplier Tables are available (see pricing above). Tables will only be reserved after payment is received. The limited number of tables available are assigned on a first-come, first-served basis. All supplier personnel must be registered for the conference and pay full registration. Electricity is available by prior arrangement (select when registering online, email request to aactinfo@gomc.com or call +1 920 295 6959).

Shipping instructions available online

Grants available The Allured Fund for Confectionery Education provides grants to individuals residing in the USA who would like to attend educational events such as this Technical Seminar, but are unable due to financial hardships. For more information on applying for the grants or for contributing to the fund, visit: <https://gomc.com/index.php/allured-fund/>

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2024 National Technical Seminar Agenda

Monday, October 7
through
Wednesday, October 9

The Hyatt Lodge
Oak Brook, Illinois, USA