

Food Safety and Quality Applications: Tools for Putting MS Methods into Practice (Flavor, Fragrance & Foodstuff Interest Group)

Organizers: Melanie Downs and James Redwine

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2019 ASMS Annual Conference Workshop Report

The 2019 workshop for the Flavor, Fragrance & Foodstuff Interest group consisted of three brief presentations delivered by invited panel members, followed by a period of discussion involving audience questions for the panel members, workshop organizers, and other attendees. The three presenters were:

Melinda McFarland (FDA)

Paula Piotrowski (NIST)

Jane Guido (Kalsec®, Inc.)

The audience was estimated at approximately 90 attendees, standing room only in the awkwardly shaped and located room A309. The audience was of similar make up as years past, with the audience mostly representing instrument/consumable vendors, academics involved with current research, and government agencies.

Briefly, the presentations were approximately 10-15 minutes each. The three presentations covered a range of topics. Melinda McFarland focused on protein contaminants and the use of various databases to assist in accuracy and rugged detection and identification. Paula Piotrowski offered an update on the status of SRMs in food matrices that are currently under development by NIST. Jane Guido demonstrated some tips and elaborated on practical challenges faced by food ingredient suppliers in quantification of residue-level contaminants in food matrices.

A quite lively discussion followed the three presentations. Protein analysis was a very popular topic, with valuable insights contributed by Melanie Downs, Melinda McFarland and audience member Michelle Colgrave (CSIRO). The types of protein analysis discussed focused on allergens, sensitizers and potential toxins. This continues to be a very difficult field of analysis. Other lines of discussion included practical concerns such as analysis approaches and sampling (always a challenge in food).

The discussions did highlight a valuable feature of the FFF workshop at ASMS. Regulations, expectations and requirements for safety and contaminant testing in food and food ingredients is a very fractured landscape. There has been little progress in global harmonization, and even within the U.S., the regulatory landscape is complicated, with differing regulatory entities responsible for differing regulations depending on product type (USDA vs. FDA oversight), and analyte being measured. For methods, there are several organizations that publish methods (AOAC, USP, etc.) that occasionally differ

from each other, or specialize in individual matrices. This workshop offers a valuable forum for people of differing expertise in different areas to offer assistance.

This year was Melanie Downs second year of the two-year rotation. Travis Falconer (FDA) has volunteered to co-chair next year along with James Redwine.