

Activity Outline
FDA Grand Rounds: Analysis of Per and Polyfluoroalkyl Substances (PFAS) in foods- Analytical method development, challenges and successes
April 9, 2020
WO 2: 2047

Activity Coordinators:
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Series Description

The FDA Grand Rounds is webcast every other month to highlight cutting-edge research underway across the agency and its impact on protecting and advancing public health. Each session features an FDA scientist presenting on a key public health challenge and how FDA is applying science to its regulatory activities.

Lecture Description

Per- and polyfluoroalkyl substances (PFAS) are a family of human-made chemicals that are found in a wide range of products used by consumers and industry. There are thousands of types of PFAS, some of which have been more widely used and studied than others. Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) have been widely studied due to their persistence, distribution, toxicity, and bioaccumulation in humans and the environment. Humans can be exposed to these compounds from environmental contamination (landfills, wastewater treatment plants, the use of aqueous film forming foams (AFFF)), household exposure (upholstery, carpeting, dust) and the diet. In order to assess exposure to PFAS from foods, analytical methodology for the determination of these compounds at part per trillion concentrations is needed.

A QuEChERS LC-MS/MS method has been developed and validated for determination of trace concentrations of PFAS (part per trillion) in several commodities including fruits, vegetables, milk, cheese, grains, meats and other foods. The final method was used to analyze 179 composite food samples collected as part of the FDA's Total Diet Study (TDS) program. TDS foods represent a broad range of foods, including breads, cakes, fruits, dairy, vegetables, meats, poultry, fish, and bottled water, that the average consumer might eat. FDA's recent surveys of foods that are part of the general food supply did not detect PFAS in the vast majority of the foods tested. . These results and the continued analysis of TDS samples will inform the Agency's continued work to understand the occurrence of PFAS in the general food supply.

Details of the method, validation, analytical challenges encountered during the research and results will be presented.

References

- Genualdi, S. and DeJager, L., Determination of 16 Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) in Food using Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS), FDA Foods Program Compendium of Analytical Laboratory Methods: Chemical Analytical Manual (CAM), C-010.01, <https://www.fda.gov/media/131510/download>

Series Objectives

- Discuss the research conducted at the FDA
- Explain how FDA science impacts public health

Learning Objectives After completion of this activity, the participant will be able to:

- Discuss per and polyfluoroalkyl substances and their uses
- Explore the history of PFAS analysis at CFSAN
- Describe analytical methodology and validation
- Explain challenges encountered during method development, validation and sample analysis
- Discuss the results of food analysis and discuss future work

Target Audience

This activity is intended for physicians, pharmacists, nurses, and other scientists within the agency external scientific communities.

Agenda

Lecture 1 April 9, 2020

| Time | Topic | Speaker |
|------|-------|---------|
|------|-------|---------|

12:00 -
1:00 PM

Analysis of Per and Polyfluoroalkyl Substances (PFAS) in foods- Analytical method development, challenges and successes

Lowri DeJager,
PhD

Continuing Education Accreditation



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IPCE CREDIT™

This activity was planned by and for the healthcare team, and learners will receive 1 Interprofessional Continuing Education (IPCE) credit(s) for learning and change.

CME

FDA Center for Drug Evaluation and Research designates this live activity for a maximum of 1.00 *AMA PRA Category 1 Credit(s)*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CPE

This knowledge-based activity has been assigned ACPE Universal Activity Number JA0002895-0000-20-022-L04-P for 1.00 contact hour(s).

CNE

FDA Center for Drug Evaluation and Research designates this activity for 1.00 contact hour(s).

Requirements for Receiving CE Credit

Physicians, pharmacists, nurses, and those claiming non-physician CME: participants must attest to their attendance and complete the final activity evaluation via the CE Portal (ceportal.fda.gov). For multi-day activities, participants must attest to their attendance and complete the faculty evaluation each day. Final activity evaluations must be completed within two weeks after the activity - no exceptions.

Pharmacists will need their NABP e-profile ID number as well as their DOB in MMDD format in order to claim CE credit.

Important Note regarding completion of evaluations and receiving credit

Attendees have 14 days from the last day of the activity to log in, complete the required evaluation(s) and attest to your attendance to claim credit. Physicians and nurses may then view/print statement of credit. Pharmacists should log into the CPE monitor 10 weeks after the last session of the activity to obtain their CE credit.

Disclosure

Faculty

- DeJager, Lowri, PhD, Branch Chief, Center for Food Safety and Applied Nutrition - nothing to disclose

Planning Committee

- Dinatale, Miriam, Team Leader, Food and Drug Administration - nothing to disclose
- Pfundt, Tiffany, PharmD, Pharmacist, FDA - nothing to disclose
- Thomas, Devin, LCDR, MPH, CHES, Health Promotions Specialist, FDA/OC/OCS/OSPD - nothing to disclose
- Wheelock, Leslie, MS, RN, Director, OSPD, FDA, OC, OCS, OSPD - nothing to disclose

CE Consultation and Accreditation Team

- Bryant, Traci, M.A.T., CE Consultant, FDA/CDER/OEP/DLOD - nothing to disclose
- Zawalick, Karen, CE Team Leader, FDA/CDER/OEP/DLOD - nothing to disclose

Registration Fee and Refunds

Registration is complimentary, therefore refunds are not applicable.