



FINAL: February 18, 2020

## Laboratory Methods and Services Committee Report/Minutes

AAFCO Mid-Year Meeting  
 January 22, 2020 9:30 – 5:30 PM, Albuquerque, NM  
 FINAL

### Committee Recommendations

Committee recommendation summary or list.

- (1) None

### Board Recommendations

Board recommendation summary or list.

- (1) None.

### Association Actions

Association action summary or list.

- (1) None.

### Committee Participants

#### Members Present:

Joshua Arbaugh	West Virginia Dept. of Agriculture
Ametra Berry	Georgia Dept. of Agriculture
Deepika Curole	Louisiana Dept. of Agriculture
Manisha Das	FDA/CVM/Division of Animal Feeds
Sally Flowers	Nebraska Dept. of Agriculture
Tai Ha	Nebraska Dept. of Agriculture
H. Dorota Inerowicz	Office of the Indiana State Chemist
Mary Koestner	Missouri Dept. of Agriculture
Dominika Kondratko	Colorado Dept. of Agriculture
Mark LeBlanc	Louisiana Dept. of Agriculture
Patty Lucas	Florida Dept. of Ag and Consumer Services
Kristi McCallum	Colorado Dept. of Agriculture
Ruiqing Pamboukian	FDA/ORA/OGROP/ORO/DFS/HFC-140
Brenda Snodgrass	Oklahoma Department of Agriculture
Michele Swarbrick	Minnesota Dept. of Agriculture
Nancy Thiex	Life Member
Melanie Titley	Canadian Food Inspection Agency
Victoria Watkins	Kansas Dept. of Agriculture
Sharon Webb	University of Kentucky Regulatory Services

#### Advisors Present:

Kyle Bennett	Neogen
Andy Crawford	Consultant
Jeff Horst	Agri-King
Alexis Huyghesdespointes	JH Smucker
Lars Reimann	Eurofins
Ken Riter	Nestle-Purina Analytical Labs
Leo Schilling	Eurofins
Liberty Sibanda	Radox Food Diagnostics
John Szpylka	Mérieux NutriSciences



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## Committee Report

### Committee Activities

ACTION: None

### Sub-Committee Activities

ACTION: None

## Committee Minutes

- 1) Welcome, Introductions, & Adoption of Agenda- K. McCallum & S. Webb
  - a. Meeting called to order at 09:28 am, MST
  - b. Motion to accept Agenda- S. Flowers, Nebraska
  - c. 2<sup>nd</sup>- M. Swarbrick, Minnesota
  - d. Motion passes unanimously
- 2) Review of Committee Roster and Appointments- Group
  - a. Introductions and first time attendees introduced themselves
  - b. Review of roster
- 3) Animal Feed and Human Foodborne Illness- Dr. Cindy Friedman, MD, CDC
  - a. Presented on *Salmonella* in the Food Chain, specifically drug resistant *Salmonella*
  - b. "Solving the Public Health Challenge of Multidrug- resistant *Salmonella* in the Food Chain, What are the gaps?"
  - c. Questions and Comments:
    - i. If bacteria is resistant to drugs, does that affect resistant to other things such as heat, acid, etc.? Answer: This is an area of research.
    - ii. As we move from AFRPS funding to new funding, will FDA fund surveillance? Yes there is a strategic planning committee for food and feed partnership to go along with the Laboratory Flexible Funding Model.
    - iii. Industry perspective- seeing a rise in demand for micro assays from grain related customers.
- 4) FDA Cooperative Agreement Update- R. Randolph, APHL via phone
  - a. Purpose: "Work to Support Human & Animal Food Testing"
  - b. APHL features Success Stories on how being accredited has impacted cases and programs
  - c. Currently collecting resources for ISO 17025- have 2 libraries one for 2005 and one for 2017. If you have updated SOPs that you can share, please email them to Robyn Randolph at APHL
  - d. Best Practices Resources
  - e. Data Auditing Webinars
  - f. GOOD Test Portions Lab Trainings
  - g. Accreditation Consultant for those without FDA funding
  - h. GalaxyTrakr
    - i. Trainings and Meetings
    - ii. NCBI Best Practices Document
  - i. OTEF Framework
  - j. LCF Course Development
    - i. Laboratory Ethics- laboratory results and social meeting

- ii. Other courses are in the works.
    - k. Questions and Comments- none
  - 5) News from Nancy (Updates on Sampling, AOAC, etc.)- N. Thiex and Michelle Swarbrick
    - a. Laboratory Sampling and AOAC Activities
      - i. Sugars Working Group still active
        - 1. Dietary starch – final action
        - 2. Fructans- 1<sup>st</sup> action, collaborative studies
        - 3. Sugars- 1<sup>st</sup> action, looking for collaborative study participation, contact Dave Ellingson at Eurofins
      - ii. Sampling Methods Section added to JAOAC
        - 1. 2 manuscripts submitted
        - 2. 4 more possible
      - iii. Working on Pilot Sampling PT Exercise- ready to ship after meeting, results will be presented at annual meeting
    - b. MN Dept of Ag Sample Preparation Experiment of Dry Feed, M. Swarbrick
      - i. Splitting sample and then grinding vs Grinding sample and then splitting (GOOD Test Portions)
    - c. New (AFDO, AAFCO, APHL) Cooperative Agreement opportunity announced
    - d. Nancy would like sampling data presented at every meeting
    - e. Questions and Comments
      - i. Are you going to use different sample portions based on the study results? No because method doesn't allow.
- 6) ISO 17025 Accreditation and ORS Data Packet Review Update- Ruiqing Pamboukian, FDA, ORA
  - a. ISO 17025 Accreditation-
    - i. AFRPS Grant is 5 years followed with 1 year bridge grant and another 1 year bridge grant.
    - ii. Louisiana, Missouri, and New Mexico became accredited this year.
    - iii. Change from ISO Grant to Flexible Funding Model will be announced in Feb 2020. There will be a technical session to answer questions.
  - b. Data Packet Review- What is in a quality data packet
    - i. Sample information
    - ii. Description of condition of sample
    - iii. Complete Chain of Custody
    - iv. Traceability of sample storage conditions, quality control, etc
    - v. Analytical data- raw data, calculations, sample preparation record, methodology, validation packet if modified,
    - vi. Contact FDA (Ruiqing Pamboukian) for a copy of actionable data packet
  - c. Lab Flexible Funding Model Cooperative Agreement- looking to have a technical call in February 2020 after grant is announced
  - d. Update on FDA LAMP- Beilei Ge via Ruiqing Pamboukian
    - i. Multi lab validation between FDA labs and state labs
    - ii. Already Published in BAM
    - iii. Has been approved for screening and confirmation in all method matrices.
- 7) Working Group Updates-
  - a. Multi-element (10 min)- L. Prescott, M. Swarbrick, R. Sheridan, & S. Webb
    - i. No updates

- b. Mycotoxins (10 min)- N. Thiex, K. Bennett
    - i. Best Practices Paper Development-
      - 1. Rapid Kit Methods Group- K. Bennett
        - a. Participants- Kyle Bennett,
        - b. Received 1<sup>st</sup> draft from individuals about rapid kits
        - c. In process of getting 2<sup>nd</sup> draft
      - 2. Chapters not worked on:
        - a. Chemistry methods- Bob Sheridan is contributing but in search of a group to assist.
      - 3. Number of people are willing to contribute as references or editors but do not want to write the initial content.
    - c. Moisture (20 min)- Group Representatives- Lawrence Novotny
      - i. 4-5 labs have volunteer to perform Karl-Fischer moisture titrations on six test samples.
      - ii. In search of volunteers for test materials and samples to be split.
- 8) New Approaches to Mycotoxin Control Programs- Nancy Collette, VICAM
- a. “New Approaches to Mycotoxin Control Programs: Simultaneous Rapid Detection of Several Mycotoxins”
  - b. Rapid and Simple monitoring of feed ingredients- with one short water based extraction step and minimal hands on manipulation and run up to 5 types in one test; in field testing; takes 10 minutes; an antigen-antibody reaction; best if used on ingredients and not finished feeds.
  - c. Immunoaffinity Chromatography (Myc6in1+) for HPLC, UPLC, and LC/MS/MS for multiple mycotoxin analysis- for finished feeds; advantage LC-MS because will measure molecules that don’t fluoresce;
  - d. Alfa M<sub>1</sub>-V- Testing exposure to mycotoxins by testing for Aflatoxin M<sub>1</sub> found in dairy animal milk. Uses a biomarker; appears in milk within 1 hour after exposure and lasts up to 7 days; Rapid and Simple kit.
  - e. [Nancy\\_zabe\\_collette@waters.com](mailto:Nancy_zabe_collette@waters.com)
  - f. Questions and Comments-
    - i. Have you seen any reproducibility corn gluten feed? Answer- We have used a fluorescence method and have had success.
    - ii. What is the recovery? Answer- Spiked corn recovery was above 70%.
- 9) Working Group Updates (continued)- Group Representatives
- a. CTC- L. Schilling and M. Swarbrick
    - i. MN Dept of Agriculture Verification/Validation of CTC & OTC by HPLC
    - ii. Three different methods used to replace the microbiological method
    - iii. LCMS method will need to have more robust study. Shows higher results possibly due to carry over.
    - iv. Single Lab Validation performed by MN using modified OTC method (AOAC 2008.09) for CTC
    - v. L. Schilling suggested to expand this method for use with CTC.
    - vi. Questions
      - 1. What is the LOD? Answer- We use our lowest standard.
  - b. Fat Soluble Vitamins- D. Inerowicz, M. Swarbrick, & K. Ritter
    - i. Vitamin A- Test Portion Comparison

1. Studying how sample size affects results using method developed by Indiana
2. Conclusion- need larger test portions for Vitamin A analysis
3. Since analyzing 100g is not always feasible, looking for solutions to get similar results
4. Discussion-
  - a. Something to consider- Vitamin A manufacturing processes vary and can be contributing to the result variations.
  - b. Question- Did you use the same ratios for the 10g and 100g? No, due to container size.
  - c. Need to find a universal method to dissolve the encapsulated Vitamin A, such as enzymes. This would allow for actual sample quantification of Vitamin A.

10) Training Needs and Training Development (Microbiology, Starch, Vitamins, Amino acids, LCMSMS, training etc)- N. Thiex and K. McCallum

- a. AAFCO Board is supportive of adding laboratory workshops. Small groups only (<10).
- b. There is a policy to follow "AAFCO Training Endorsement Policy"
- c. What training is wanted? / Is it feasible/sustainable?
- d. Training should include start to finish- how to set up lab, enforcement, safety requirements, how to perform method, quality control, data reporting
- e. Possible adding a workshop to deal with the non-hands-on aspect of everything
- f. Suggestions on types of trainings- Dietary Starch in Wisconsin presented by Dr. Mary Beth Hall;

11) QAQC Subcommittee- Co-Chairs/Group

- a. Update from QA Working Group
  - i. Still working on updating 2014 QA/QC to the new ISO 17025:2017;
  - ii. A working group was formed to update the QAQC Guidelines and consists of the following: K. McCallum, S. Webb, L. Smith, J. Szpylka, and S. Flowers
  - iii. Have completed a bridge document between the 2014 and the current 2017 ISO
- b. Round-Table Discussion
  - i. Centers of Excellence Discussion
    1. Labs needs to be accredited for the method being run
    2. Labs must be willing/able to run another state's contentious samples which may not be something some state programs can do
    3. Voluntary only – Create a list of laboratory capabilities, methods, scope methods and capacity on a secured site
    4. Regulators are very interested in what methods and capacities state labs have to possibly send samples to other labs for analyses that their state lab cannot perform
    5. Use the current FERN database as a model or add feed to current FERN database as most if not all state labs are already members of FERN
    6. We should discuss how much of this information is public.
    7. This may lead to open records requests.
    8. List should not be a guarantee of services but just an ability to perform analyses.



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- 9. Could be used as an exchange of services between laboratories
- 10. Develop a work group to gather information regarding what laboratories' analyses and which analysis are accredited, if they are willing to perform analyses for other labs; Josh Arbaugh is committee chair.
- c. Potential QA Topic Presentations for Aug 2020 Annual Meeting in MD
  - i. APHL Human and Animal Feed Testing Committee Update
  - ii. Mineral/Vitamin Mix Manufacturer to gain understanding of what the vitamin looks like- BASF and DSM are some manufacturers
  - iii. Traceability and security of Electronic data (21CFR11) as regarding QA/QC, data management.
  - iv. Chelsea Kent- Would like to see more information regarding Tularemia in rendered ingredients and exposure to workers. Wondering if there is continued testing. Response from K. McCallum - the causative agent (*Francisella tularensis*) is a select agent and requires a BSL Level 3 laboratory.
- 12) Conclude Meeting
  - a. Motion- J. Arbaugh
  - b. 2nd- B. Snodgrass
  - c. Motion passes unanimously.
- 13) Meeting adjourned at 04:26 pm MST.

**Action Item Table**

Responsible	Item #	Action	Timing / Status
K McCallum S Webb	2	Update committee roster based on recent changes and submit to AAFCO BOD	Submitted February 4, 2019
K McCallum S Webb	11	Initiate contact with and organize working group objectives, priorities and deadlines with members	Done



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## Appendix

Attachments:

For a list of presentations given during this meeting, please see the AAFCO Laboratory Methods and Services committee website at the following link:

<https://www.aafco.org/Regulatory/Committees/Laboratory-Methods-and-Services#minutes>