



AAFCO
Association of American Feed Control Officials

Laboratory Methods and Services Committee Report

2022 AAFCO Annual Meeting
August 5 2022, 8:00am-5:00pm, St. Louis, MO

Committee Recommendations

None

Board Recommendations

None

Committee Participants

Members Present: Joshua Arbaugh (WV), Srinu Chigurupati (FDA), Sally Flowers (KS), Buddhika Galkaduwa (KS), Tai Ha (NE), William Hoek (NY), H. Dorota Inerowicz (OISC), Mary Koestner (MO), Patty Lucas (FL), Kristi McCallum (co-chair/CO), Rebecca Moseley (AL), Sharon Webb (co-chair/UKY), Dancia Wu (OISC)

Advisors Present: Jenny Bailie (NutriQuest), Andy Crawford (Consultant AAFCO PTP), Jeff Horst (Agri King), Matt Nichols (Neogen), Lars Reimann (Eurofins), Ken Riter (PFI NPAL), Leo Schilling (Eurofins), Brian Fitchett (JM Smucker)

Virtual Attendees: Lawrence Novotny (Life member), Nancy Thieux (Life member), Brenda Snodgrass AAFCO PTP, Angela Swinford (FDA), Ametra Berry (GA)

Committee Report

Committee Activities

During the 2022 mid-year meeting, the LMSC created and/or renewed several working groups to address the regulatory needs from the Hazards and Contaminants survey sent in 2021. The LMSC agreed that sending this survey each year to State Regulatory officials is necessary to steer LMSC activities. The 2022 Hazards/Contaminants Survey was revised and will be sent to State Regulatory officials in October 2022. Working group updates are included in the minutes below.

The LMSC held a discussion on the proposed dietary fiber labeling changes in pet foods. The LMSC identified several AOAC OMA for dietary fiber and the need to determine which of the methods identified would be the most suitable for regulatory labs to use when analyzing for dietary fiber. The laboratories present currently analyze for crude fiber. The LMSC determined that a Dietary Fiber working group was needed. A new working group was formed, and several state and industry laboratory representatives volunteered for this new working group.

Lastly, training was discussed by the LMSC. Training needs were discussed, and the co-chairs presented the proposal for the Microbiology Hands-on Workshop created by Kristi McCallum. The LMSC agreed that training was critical to State Laboratories to maintain knowledge retention for methods (e.g. microscopy methods), new staff, etc. The LMSC agreed to use the proposal template submitted to the BOD for the Microbiology Hands-on course. In addition, the LMSC agreed to create a survey to capture training needs of state laboratories so that proposals for on-going training classes could be presented to the BOD in the future.

ACTION: Agenda approval

MOTION: Motion to accept agenda by Joshua Arbaugh; Seconded by Mary Koestner. Passes unanimously

MOTION: Motion to accept the meeting minutes/committee report so moved by Sharon Webb; Seconded by Tai Ha. Passes with 16 "Aye", 2 "Abstain", 0 "Nay"

Subcommittee Activities



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The Quality Assurance sub-committee had disbanded due to the pandemic, retirements and lack of participation. The LMSC co-chairs discussed the critical need of this sub-committee. A new QA sub-committee was formed with volunteers from FDA and State LMSC members. The main charge of this sub-committee is to revise the AAFCO Quality Assurance/Quality Control Guidelines for Feed Laboratories to meet the updated IS17025 requirements

ACTION: None

MOTION: None

Committee Minutes

- 1) Welcome, Introductions, & Adoption of Agenda- K. McCallum & S. Webb
- 2) Review of Committee Roster and Appointments- Co-chairs
 - a. Please email Kristina.mccallum@state.co.us with any changes
 - b. Please update your profile in FoodShield if your information is outdated.
- 3) Association of Public Health Laboratories (APHL) Update – R. Randolph
 - a. The APHL's Human and Animal Food Testing (HA)F subcommittee has been elevated to APHL Advisory Committee.
 - i. Applications open in Spring 2023. The start date will be July 1st. You must be a APHL member to join.

For those interested, this links to the Public Health Associate Institutional (PHAI) member application:
https://www.aphl.org/membership/Documents/MEM_PHL-Institutional-Associate-Membership-Application.pdf

- b. Public Health Laboratory System Database – State labs, please consider entering your lab's testing methods and capabilities. Email Robyn Randolph for instructions.
 - c. Task Force to Engage Environmental and Agricultural Laboratories - evaluating the categories of public health labs to see how they can foster better cooperation. Public Health Associate Laboratories (PHAL) – Task Force is redefining who can join.
 - d. 2022 LFFM CAP meeting -St. Louis -Nov 15-17th
 - e. Training & Resources -there are a lot of training resources available on APHL website Training Portal. Access is restricted to government labs.
 - Quality Management Training Series (QMTS) available
 - Quality Assurance Community of Practice forum -connects over 300 laboratories
 - Evidentiary and Analyte Integrity Policy Checklist -helps laboratory guide conversation with their inspectors and identifies specific information about what is important for preserving sample integrity.
 - f. GenomTrakr Training & Meetings -Oct 19-20, College Park, MD.
 - g. ORA DX Collaboration -APHL is working with FDA, state partners and other associations to identify needs and concerns for implementing the data exchange.
 - h. NCS Laboratory Framework -goal is to build a competent workforce
- 4) LMSC Quality Assurance Sub-Committee – Co-chairs
 - a. LMSC QA Subcommittee needs to be revitalized, currently only Kristi and Sharon are left on the committee. It was originally formed around 2015/2016. The charge was to assist state labs with ISO17025 accreditation and to promote quality assurance.



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- b. The committee will revise the AAFCO Quality Assurance/Quality Control Guidelines for Feed Laboratories to meet the updated IS17025 requirements. The committee is also responsible for finding speakers to provide QA updates at the LMSC meetings.
 - c. New Volunteers: Sue Humphries (FDA), David Snell (OISC), Leo Schilling (Eurofins), Carrie Crabtree (GA), Robin Johnson (MT), and Srinivaslu Chigurupati (FDA)
- 5) Presentation/Discussion: Status of Laboratories -How are labs coping with a changing work environment? – K. McCallum
- a. Supply issues – Examples include helium, analytical/reference standard materials, other consumable supplies, and equipment.
 - i. The solution for many labs is to adapt and change how their instruments operate (e.g., using hydrogen as a carrier gas instead of helium) and modify methods to use different materials/equipment
 - ii. There is no Vitamin A standard from USP available at this time which is preventing some labs from being able to analyze for Vitamin A. Sharon Webb is looking for an alternative and will use AGLabs list serv to contact labs if she finds an alternative source.
 - b. Costs have risen dramatically for chemicals, consumables, etc. but lab budgets have not. Shipping issues continue with major shipping companies creating delay in arrival of critical lab supplies and samples.
 - c. Staffing issues – Staff leaving, and morale are major problems in the labs because they are seeing others who are allowed to telework, and this is not possible for lab personnel as their jobs require them to be in the lab each day.
 - i. Solutions tried: West Virginia's lab started a day a week telework program where staff can work on document review and virtual training. CO has an ad hoc telework system where staff can ask to telework for special circumstances.
 - ii. Training new and existing staff -remote training doesn't work well and there are issues with the quality of candidate pools for hiring.
- 6) Presentation: A Comparison of Heavy Metals in Plant and Animal Based Meats and Fish by Microwave Digestion & ICP-OES and ICP-MS Analysis – Macy Harris, CEM
- a. Presentation will be uploaded on AAFCO website under Laboratory>Meeting Minutes and Presentations
- 7) Dietary Fiber Testing – J. Arbaugh
- a. Changes in pet food labeling are being discussed by AAFCO with the major change being from Crude Fiber to Dietary Fiber.
 - b. If labs will be asked to test for dietary fiber, a method consensus is needed. The concern is that some materials may be used that are not truly fiber so having the correct method is very important. Josh looked at PT samples and there was only one data point found for dietary fiber. Methods 2020-07 (included pet food) and 991.433 are in the PT program now. There are other methods such as 2017-16 that are not.
 - c. Recommendation: Consult with an FDA nutritionist to give us an idea of what we should be testing as it relates to pets. Method 985.29 may have been validated for pet food but can't find the data. Once the label change is/if passed, industry would be given 2-3 years to update labels.
 - d. Methods: AOAC 991.43 -Total Dietary (TD) -doesn't include pet feed, AOAC 2009.01 – TD -not sure if it includes pet feed, AOAC 2011.25 –TD
 - e. A Dietary Working Group was formed and includes the following: Josh Arbaugh will Chair, Mary Koestner, David, Lars Reiman, Ken Riter, Matt
- 8) Presentation: Dioxin Analysis in Feeds at the CFIA Calgary Laboratory - Nishma Karim



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- a. Presentation will be uploaded on AAFCO website under Laboratory>Meeting Minutes and Presentations
- 9) LMSC Working Group Updates
- a. **Fat Soluble Vitamins**
 - i. The Vitamin A study has been published and is available as open access (<https://doi.org/10.1093/jaoacint/qsab158>). The next step for Vitamin A will involve strategies for dealing with the large test portion sizes (100 grams +) required, but no experiments have been performed since the last meeting. Vitamin D3 has been added to the working group, but no discussions yet.
 - ii. Vitamin E conversion factors are listed in AOAC methods 971.30 and 948.26.
 - b. **Multi-element**

Update: Working Group is gathering the methods. Next steps will be to review the methods for best practice guidance.
 - c. **Mycotoxins**

Update: The Working Group needs to gather information on what methods are currently being used (survey?), review the methods and work on best practices for the website. The focus of this working group will be to create best practices for a variety of parameters (e.g., sample storage, container types, extraction method). The Radox PT codes have been added to the PT program.
 - d. **Moisture KF method in pet food – L. Novotny**

Update: Lawrence will be calling the working group together. It's a small group of 4-6 people so if anyone else wants to join, please email Lawrence at actup@brookings.net
 - e. **Microbiology**
 - i. Microbiology Training: Kristi presented a training proposal to AAFCO board of directors for a weeklong course for a small group. Training topics will include how to set up a micro lab and will include class work and hands on experience. The board approved it and AAFCO wrote a grant proposal to FDA to fund it and they are awaiting the notice of award. The attendees should have some basic lab experience. The training will be scheduled for early spring 2023.
 1. The AAFCO board supports funding projects like this, but we need to see what is involved and something like what Kristi put together would be great. Kristi can send you the template she used to put together her training proposal. Rebecca -how do labs apply for this?
 2. Recommendation: The LMSC would like to develop a training program that other could rotate to interested State labs. In addition, small trainings where a lab could send 1-2 staff to a State lab for training on a specific method would be beneficial to all labs.
 3. AAFCO Procedure Manual -page 28 -contains the AAFCO procedures for submitting proposals
 - ii. Microscopy:
 1. Concerns were raised that laboratories are losing expertise and knowledge in microscopy analyses. There are for basic areas of microscopy to focus on, prohibited materials (BSE), other adulterine, noxious weed seed, and ingredient identification.
 2. K. McCallum is willing to reach out to FDA to see if they still offer any training. There is no formal PT program for microscopy competency.
 3. Josh asked if any state's regulatory program is asking for this testing. MO has requests for contaminants. KS had a request for filth testing.
 4. Recommendation -LMSC may be able to create our own level 1 class.
 - f. **Pesticide Residues**



Updates: Concerns were raised by the LMSC as to how many state regulatory programs have regulatory statutes regulating pesticides in feeds. Most state labs have a pesticide testing capabilities but pesticides are regulated by divisions within their state DOA not related to animal feed. Josh Arbaugh will raise the concerns to the Enforcement Committee. This working group may not be necessary. Below is the link to the CPG Sec 575.100 Pesticide Residues in Food and Feed - Enforcement Criteria

https://urldefense.proofpoint.com/v2/url?u=https-3A_www.fda.gov_regulatory-2Dinformation_search-2Dfda-2Dguidance-2Ddocuments_cpg-2Dsec-2D575100-2Dpesticide-2Dresidues-2Dfood-2Dand-2Dfeed-2Denforcement-2Dcriteria&d=DwMFAg&c=sdnEM9SRGFuMt5z5w3AhsPNahmNicq64TgF1JwNR0cs&r=vJd14lvF3JV9ejyQ3tltzkaCx6fOgfbxfnXFTg7HpNE&m=IJU0smxUO85tvP-4T9EkNQtYBagU_GA-4lcE4JhplNYUOyCRclpGo9mDD2IB5PJL&s=dvJcJmTbTGkosQx_VGQkWdxY9SF_UeHGSmoDa9O9xpE&e=

g. **Drug Residues**

Updates: The working group is unclear as to what the specific regulatory need is (e.g., medicated feed, feed ingredients, completed feed). Monensin and Lasalocid were the most critical needs from the regulators. Methods are well established but may need best practice guidance.

h. **Toxins: Pentobarbital, Dioxin**

Update: None as working group lead was unable to attend the meeting. See Dioxin presentation posted on AAFCO website.

i. **Hemp**

Update: Hunter Buffington met with ASTM where they discussed ASTM progress. ASTM D8440-22 -Table 1 -Specification for Food Safety and Quality of Hempseed Products Intended as Food. 2017 is when ASTM has started looking at cannabis. There are now over 40 standards. ASTM will assist with validation study for oil. There are many interested in participating but a method needs to be established first. The method chosen will need to be able to detect very low total delta-9 THC levels and therefore will likely be on an LCMSMS platform. The LMSC recommends performing a matrix extension validation study of the AOAC OM 2018.11 to include finished feeds and pet food.

j. **Round Table Discussion**

- i. Lars Reiman -With older committee members retiring, Lars raised a concern to the group to find out where the AAFCO FDA master file is kept and who oversees it. From Linda Benjamin: Becky Owens is the contact person for the AAFCO Master Files.

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- ii. Leo Schilling inquired about the interest from State labs for a Tylosin method, is there still an interest from the states in a micro method anymore? Indiana sees 4 or 5 samples a year. Sally is seeing about 10 samples a year. No other states responded that they see Tylosin samples.
- iii. Jeff Horst: The Sugar Profile method AOAC 2018.16 that all of you participated in for the multi lab validation was voted yesterday by the AOAC ERP to Final Action.



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Action Items

Responsible	Item	Action	Timing / Status
Co-chairs	Annual Hazards/Contaminants Survey	Revise and send survey to regulators for 2022	October 2022/Sent to AAFCO for email distribution
LMSC QA Sub-committee	QAQC Guidelines	Revise the QAQC Guidelines to align with ISO17025:2017	September 2022 – January 2023