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Outcomes and Future Work of the AOAC ISPAM Harmonization Project

Presented By: Erin Crowley and DeAnn Benesh

Sponsored By: AOAC INTERNATIONAL and Microbiologics

Organized by: Methods Validation & Verification Interest Group within the Applied Laboratory Methods PDG



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Webinar Housekeeping

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Webinar Housekeeping

- It is important to note that all opinions and statements are those of the individual making the presentation and not necessarily the opinion or view of IAFP.

- This webinar is being recorded and will be available for access by IAFP members at www.foodprotection.org within one week.

DeAnn L. Benesh

Global Regulatory Affairs Manager – 3M Food Safety

- Leads regulatory activities with government and non-government entities to help drive harmonization, recognition and acceptance of microbiological methods
- Member of MicroVal General Committee
- Active member of IAFP International and Food Law PDGs
- Co-chair of WG3 drafting ISO 16140-part 3
- Fellow of AOAC INTERNATIONAL and past Chair of the Research Institute Board of Directors
- Currently serves on AOAC Board of Directors as Past-President

Erin Crowley

Chief Scientific Officer – Q Laboratories

- Leads independent third-party laboratory with a primary focus on providing high quality method validation for microbiological rapid detection methods
- Chair of the AOAC Official Methods Board
- Chair of the International Stakeholder Panel on Alternative Methods (ISPAM)
- Active member of IAFP and MicroVal Technical Committee (MVTC)

Q Laboratories

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INTERNATIONAL STAKEHOLDER PANEL ON ALTERNATIVE METHODS (ISPAM)

Outcomes and Future Work of the AOAC ISPAM Harmonization Project

Erin S. Crowley
ISPAM Chair
October 26, 2018

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AOAC Roots in Food Safety

Began as Association of Official AGRICULTURAL Chemists (1884)

USDA Bureau of Chemistry

- ✓ Standardize methodology used for composition of fertilizers by state laboratories
- ✓ Directed by Harvey Wiley who wrote the 1906 law that began the US Food and Drug Administration (FDA)

AOAC - 1887 Meeting

- **1965 – Association of Official ANALYTICAL Chemists**
- **1980s - microbiologists, other food science professionals**
- **1991- AOAC INTERNATIONAL (Association of Official Analytical COMMUNITIES)**

AOAC INTERNATIONAL EST. 1884

- AOAC develops and validates analytical methods for a broad spectrum of safety interests including
  - Food and beverages
  - Dietary supplements
  - Infant formula
  - Feeds
  - Fertilizers
  - Soil and water
  - Veterinary drugs
  - Pharmaceuticals

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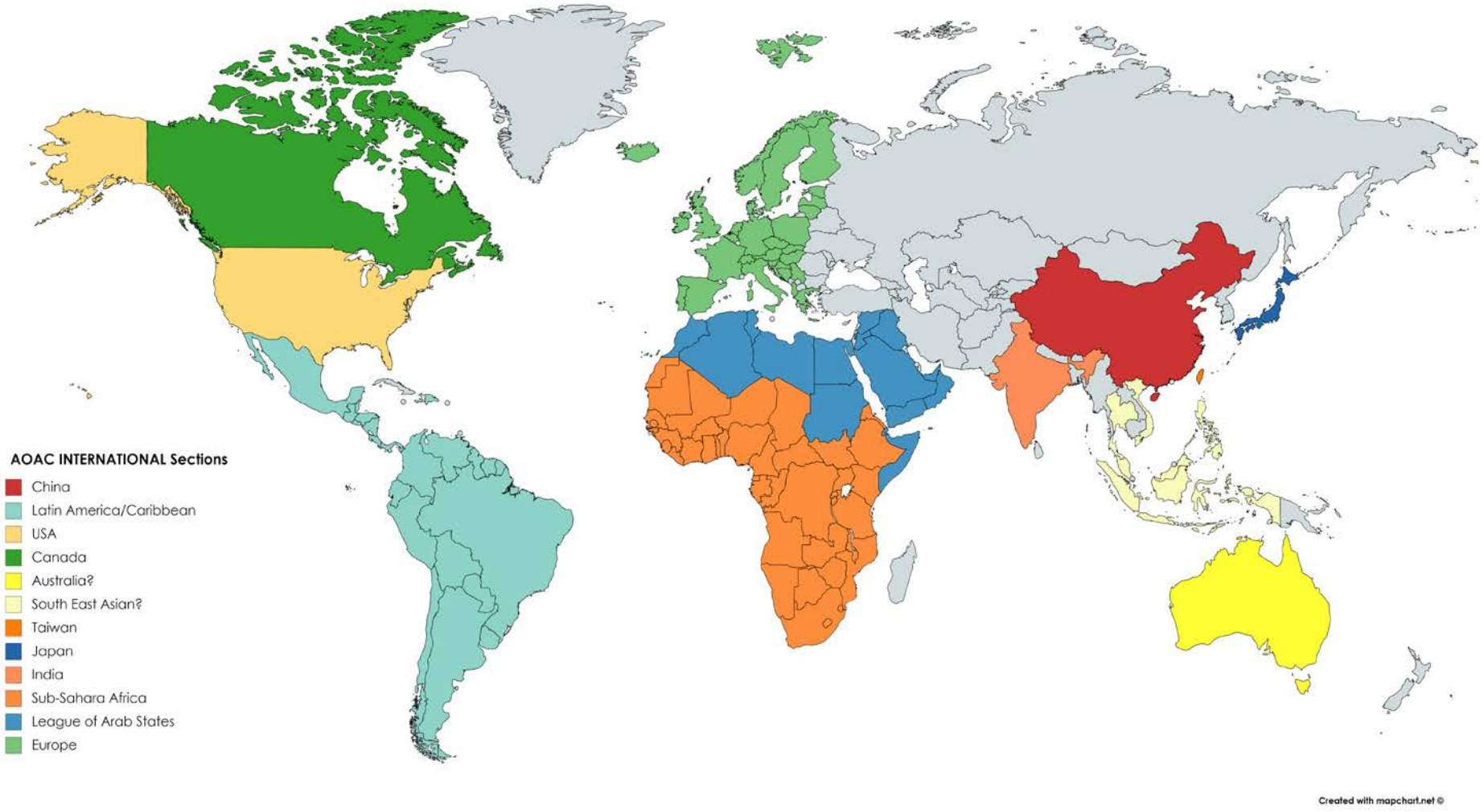

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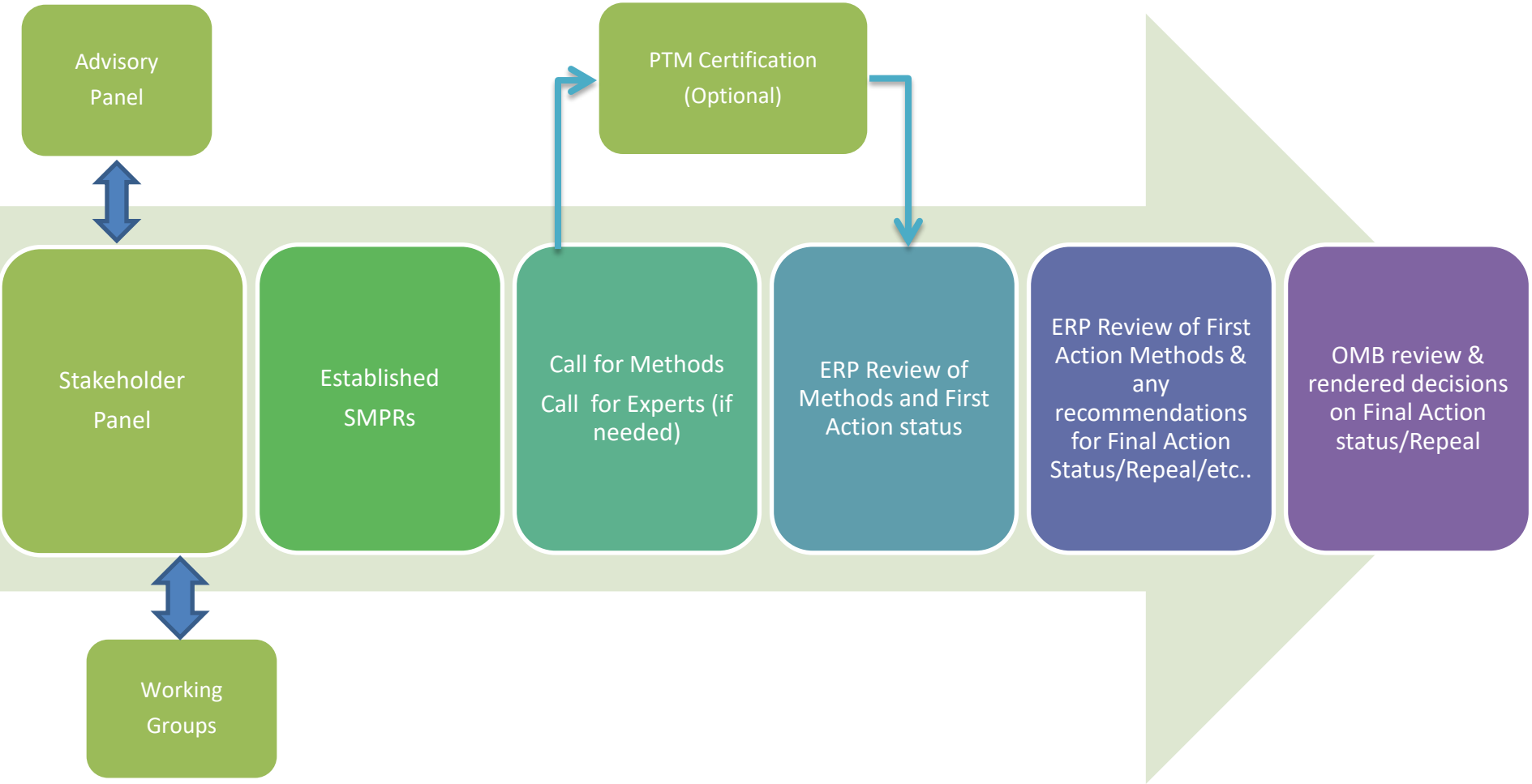
AOAC Standards Development

Transparency, Openness, Balance, Due Process, Consensus, Appeals



Projects using AOAC Standards Development Process

- **International Formula Council**

  Nestlé, Danone, Mead Johnson, Abbott Nutrition, PBM…

  Developed consensus standards and Official Method of Analysis for analysis of priority nutrients (e.g. Vitamins A/E, Vitamin D, Vitamin B12, Folate, Inositol, Nucleotides, Ultra trace minerals, Pantothenic acid)

- **Coca Cola and PepsiCo**

  Delivered AOAC® Official Method℠ for pesticide residues in soft drinks

  Accepted by Bureau of Indian Standards as official method

- **Elanco Animal Health, Eli Lilly and Co.**

  Developed standards for drug residues in animal feed

- **International Stakeholder Panel on Alternative Methods**

  Harmonization of Validation methods between ISO and AOAC

International Stakeholder Panel on Alternative Methods (ISPAM)

- Driven and supported by AOAC Organizational Affiliates and contributing members who participate in the AOAC Research Institute Program

- ISPAM was formed initially to develop harmonized, internationally accepted standard validation guidelines for alternative (rapid) chemical and microbiological methods by leveraging global networks of experts to reach consensus on an analytical validation protocol.

- The goal is to achieve optimal efficiency and avoid duplication of efforts in order to meet regulatory and product safety testing requirements.

- Initially three (3) working groups:
  - Microbiology
  - Qualitative Chemistry
  - Statistics

AOAC RESEARCH INSTITUTE

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Participating Stakeholders = > 60 industry, gov, academia

Government

- Health Canada
- Canadian Food Inspection Agency
- US Food & Drug Administration
- US Dept of Agriculture
- Meat and Livestock Australia
- Netherlands Food & Consumer Product Safety Authority
- ACHIPIA – Chile Ministry of Agriculture
- ANSES – French Agency for Food, Environmental and Occupational Health & Safety
- Maryland Department of Agriculture
- Florida Dept of Agriculture

Test Kit Manufacturers

- 3M Food Safety
- bioMérieux
- BioControl
- Bio-Rad
- Crystal Diagnostics
- Elution Technologies
- Hygiena (Qualicon Diagnostics)
- Morinaga
- Neogen
- QIAGEN
- R-Biopharm
- Romer Labs

Food Companies

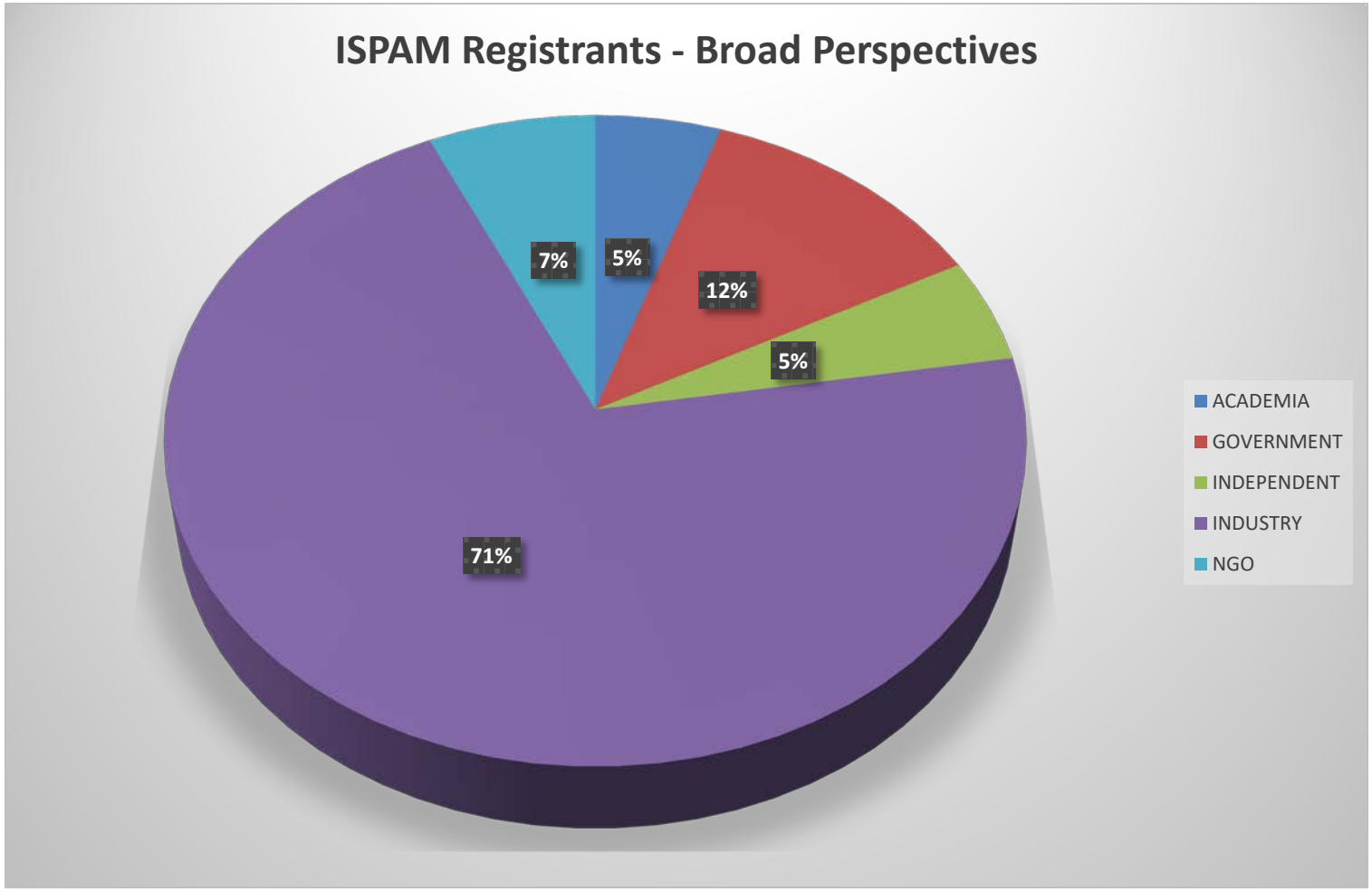
- Abbott Nutrition
- Cargill
- Nestle
- General Mills
- Hershey Company
- McCormick
- Quaker Oats
- Grain Millers

Certification Bodies/NGOs

- AFNOR
- MicroVal
- NMKL/NordVal
- ISO
- GFCO-GIG
- Allergen Control Group

Contract Laboratories

- Q Laboratories
- Adria Laboratory
- AsureQuality
- Mérieux NutriSciences (Silliker)
- Eurofins
- Microbac
- Vanguard


ISPAM Registrants - Broad Perspectives
7%
5%
12%
5%
71%
ACADEMIA
GOVERNMENT
INDEPENDENT
INDUSTRY
NGO

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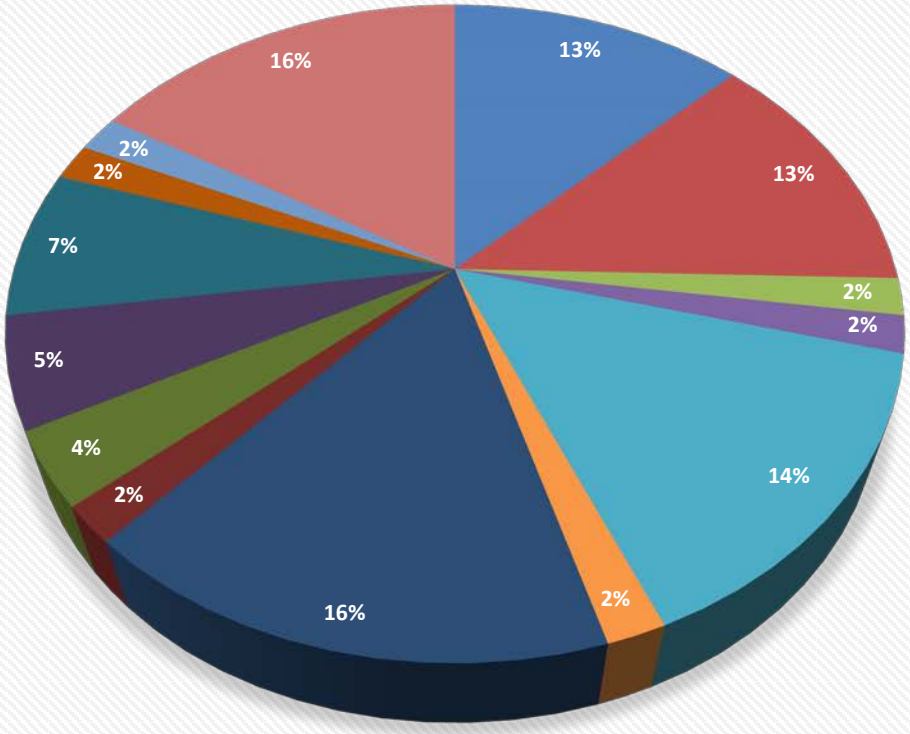
ISPAM Registrants - Specific Perspectives



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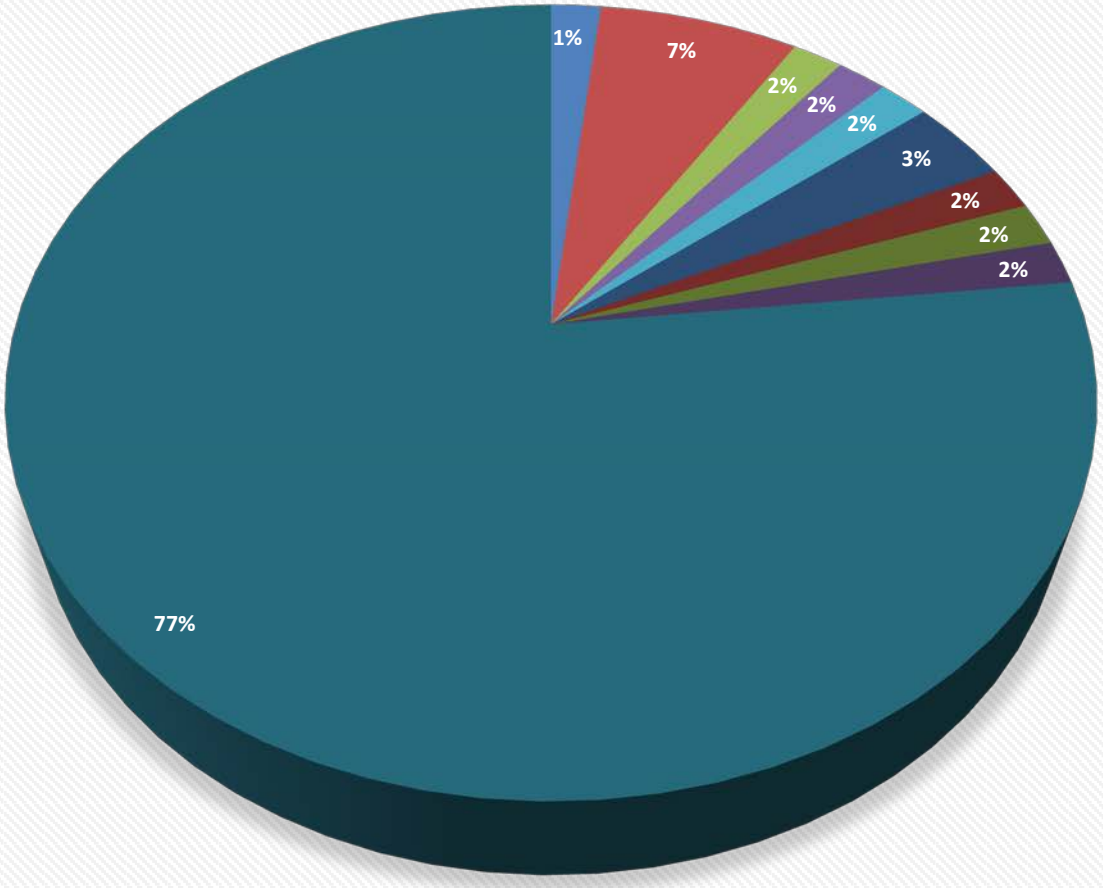
ISPAM Registrants - Regional Perspective



Stakeholder Panel Working Groups

- Present background and history on priority analyte for stakeholder panel
- Develop draft SMPR or other assigned scope
- Will present motions to the stakeholder panel on components of the standard method performance requirements
- Can participate in ISPAM related in-person meetings

ISPAM Working Groups

ISPAM Working Groups	Status
Working Group on Microbiology Validation Harmonization	Active
Working Group on Qualitative Chemistry Guidelines	Inactive
Working Group on Statistics	Inactive
Working Group on Produce Sampling Standard	Inactive
Working Group on Produce – Salmonella in Leafy Greens	Inactive
Working Group on Food Allergen Assays	Active
Working Group on Gluten Assays	Active
Working Group on Quantitative Microbiology Method Validation Acceptance Criteria	**New 9/2017**

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Documentation and Communication

AOAC carefully documents the actions of the Stakeholder Panel and the Working groups

AOAC will prepare summaries of the meetings

- Communicate summaries to the stakeholders
- Publish summaries in the *Referee* section of AOAC's *Inside Laboratory Management*

AOAC publishes its voluntary consensus standard

- *Official Methods of Analysis of AOAC INTERNATIONAL*
- *Journal of AOAC INTERNATIONAL*

AOAC publishes the status of standards in the *Referee* section of AOAC's *Inside Laboratory Management*

HARMONIZATION OUTCOMES: ISPAM

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"Oh, what a tangled web we weave."

Harmonization - Program to Program

The PTM program provides the pre-collaborative study required by other validation programs.

serves as an entry to method validation

The AOAC Consulting Service and the AOAC *Performance Tested Methods℠* are flexible to develop:

Joint validation testing protocols

Joint data collection arrangements

Separate or joint manuscripts reviews

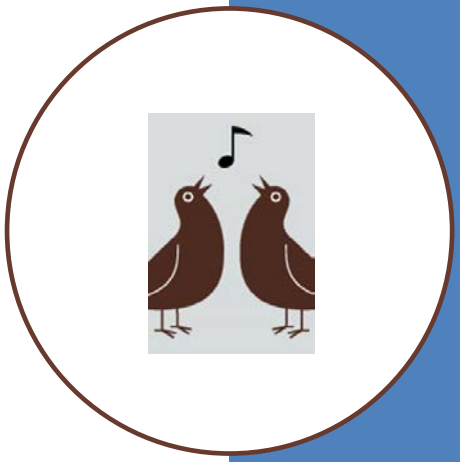
Each organization maintains its program administrative and method approval procedures

For additional information, please contact Deborah McKenzie, Sr. Director, AOAC Research Institute.

HARMONIZATION-PROGRAM TO PROGRAM

- Programs harmonized with PTM
  - *Official Methods of Analysis*℠
  - Antibiotic drug residues in milk
    - US Food & Drug Administration Center for Veterinary Medicine and the National Conference on Interstate Milk Shipments
  - Health Canada – Bureau of Chemical Safety (Food Allergens)
  - MicroVal (joint-agreement)
  - AFNOR (joint-agreement)
  - NordVal (joint-agreement)

- *The goal is to achieve optimal efficiency and avoid duplication of efforts in order to meet regulatory and product safety testing requirements.*



ISPAM Accomplishments: Microbiology

Approved harmonized approaches for several testing parameters

- Number of levels/samples/fractional positives
- Results analysis/criteria/statistical analysis
- Number of data sets for collaborative study/sample size

Approved Food Classification Table- ISO 16140-2 Annex A

Comparison of Method Validation Guidelines

Criteria	ISO 16140	AOAC	Health Canada	NordVal	US FDA	USDA
Qualitative Methods	ISO 16140 Doc. N 1199 (ISO CD 16140-2)PIV C2011-04-06 Pending revision of Part 2	OMA, Appendix X Draft revision document dated 3/24/2011	Health Canada Draft Part 4 dated March 2011	NordVal Protocol for the validation of alternative microbiology methods March 2009	FDA's Qualitative Microbiology Methods Validation (ORA-LAB-7 verstion 1.2), pending revision (*proposed revision marked in red*).	Draft Guidelines Disclaimer: The use of the term "validation" is not intended to have any application to the implementation of 9 CFR 417 4(a)(1) on initial validation of HACCP plans. The Draft FSIS Guidelines deals exclusively with the evaluation of pathogen test kit methods
Reference Method	Defined in ISO 16140-1 - 1st priority is ISO method, 2nd priority is CEN method if neither exists, then 3rd priority is other recognized methods Note – definition still under discussion to open up for non ISO/CEN methods (PTV)	Can use various existing recognized analytical methods (e.g., AOAC, OMA, ISO, FDA BAM, FSIS MLG, Health Canada) If no appropriate Ref can indicate "NA" in summary tables for POD	Acceptable Ref published by EC (Part 1) May include any methods from methods organizations (i.e., AOAC, FDA, APHA, ICMSF, IDF, ISO, etc…) Where no Ref exists, MMC assess on case by case basis	ISO, CEN, NMKL, BAM, etc… It is up to the applicant; however, as the EU regulation in EC 2073/2005 Microbiological criteria states EN ISO methods there are most frequently used.	Most be BAM unless tere is no BAM reference method. In case of no Bam, then FSIS MLG, AOAC, ISO, and Health Canada are all potential reference methods. APHA, ICMSF, and IDF methods may also be used as reference methods	FSIS Microbiology Laboratory Guidebook (MLG) cultural methods is the is used for validating methods used by FSIS regulated establishments. FDA BAM or methods referenced by ISO or Codex. Non cultural methods applicable in some cases

ISPAM Sub-Group on Validation and Verification of "All Foods Claim"

- Based on recommendations from sub-group:
  - ISPAM voted to recommend to replace "all foods" with a claim for a "broad range of foods"
  - ISPAM recommends that method validation organizations require method developers to specify the validated food claims in the method applicability statement/product insert
  - No previously approved method with an "all foods" claim will be affected by ISPAM's recommendation

ISPAM Sub-Group on Validation and Verification of "All Foods Claim"

- ISPAM recommended that developers of analytical methods follow ISO 16140-2 Annex A, *Guidance on food matrices and food categories for method validation,* as a guidance for choosing food categories to make a "broad range of foods" claim

- ISPAM agreed to adopt the ISO 16140-1 Part 1: "Terminology of method validation" working definitions for "validation" and "verification"

ISPAM Accomplishments cont'd

Harmonization WG in participation of the collaborative study for *Salmonella* reference method.

- Modified BPW, ISO BPW, and other BPW lactose broth
- Matrices to be determined
- Collect data to evaluate the possible differences between 35°C and 37°C selective enrichment (sensitivity study and RLOD)
- Secondary enrichment comparisons

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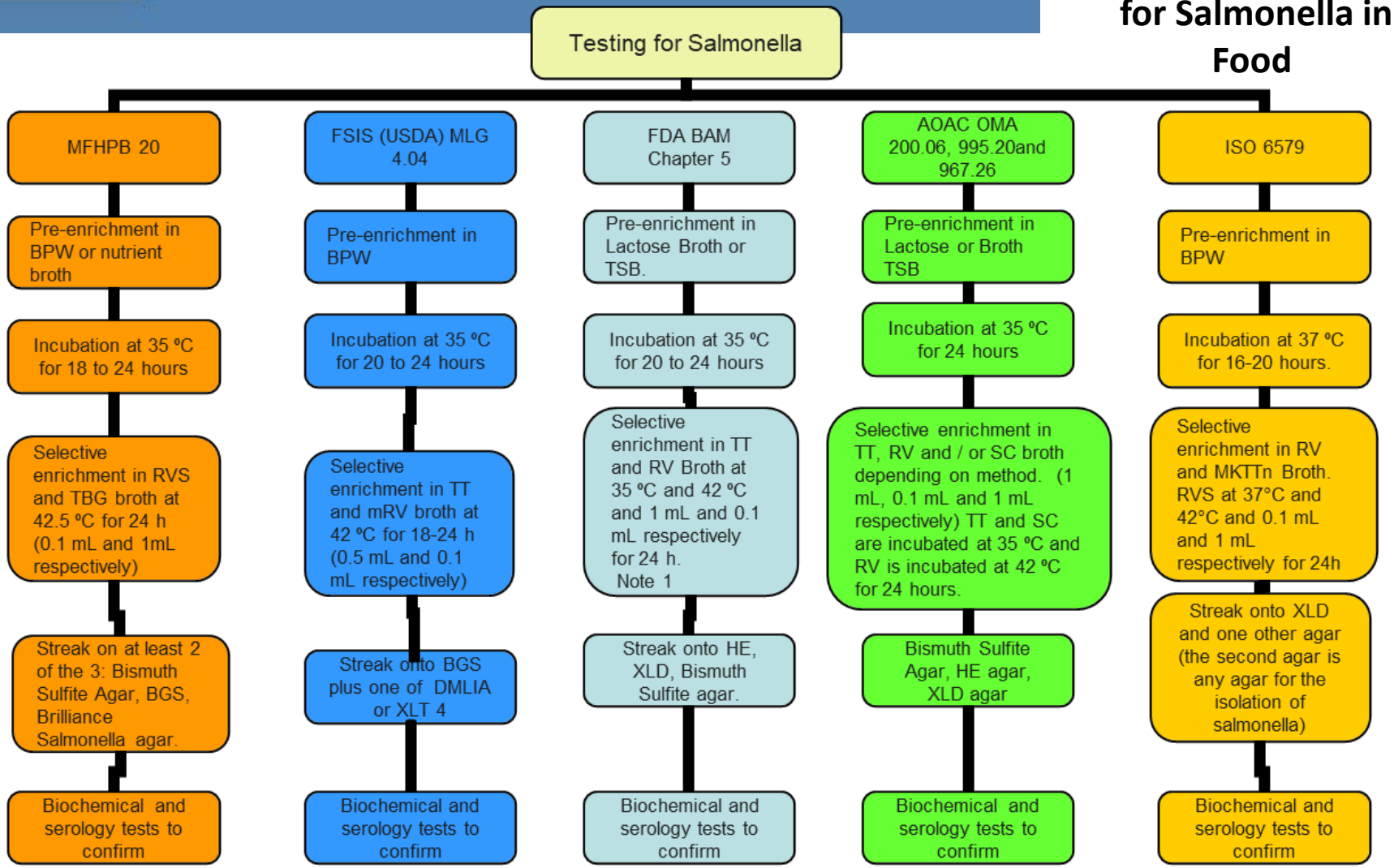
Comparison of Select International Reference Methods for Salmonella in Food



Slide courtesy of I. Iugovaz Health Canada

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Pre-Enrichment Media (*Salmonella*)

AOAC – lactose broth, brilliant green water (BGW), TSB, TSB+K2SO4, Nonfat dry milk (NFDM) +BG

BAM (FDA) – lactose broth (some with various additives),TSB with or without ferrous sulfate, BGW, Universal enrichment broth, nutrient broth, NFDM+BG, tetrathionate broth, BPW (UPB for cantaloupes, BPW for mangoes!)

Where AOAC and BAM have the same food commodities, they are more or less in agreement (slight differences).

MLG (FSIS-USDA) – BPW

HC – usually BPW (or Nutrient Broth), plus 2 others for specific foods - skim milk medium, BGW

ISO – BPW (one exception when casein or sterile sikm milk powder is added to BPW, plus Brillian green for cocoa)

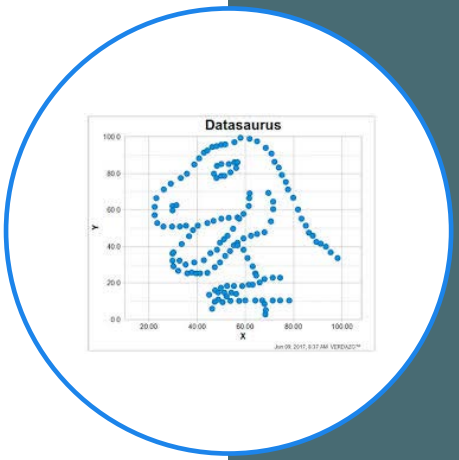
Slide courtesy of I. Iugovaz Health Canada

WG on Acceptance Criteria of Quantitative Microbiology Methods

- Fit-for-Purpose Statement Endorsed

  To develop statistical analysis and acceptance criteria of quantitative methods that will balance the goals of:

  - 1. Minimizing the chance of accepting a method that is not fit for purpose
  - 2. While maximizing the chance of accepting a method that is fit for purpose
  - 3. Providing guidance on relevance of deviations



- **WG on Quantitative Statistics**
  - The working group determined a priority sequence of activities based on feedback from the stakeholders.

  - **PRIORITY SEQUENCE**
    1. Difference of Means (Acceptance criteria)
       a. Indicator organism vs. pathogens
       b. Principle of the technology

    2. Number of out of range levels per assay- what is still acceptable?
       a. Recommendations for dealing with discordant results

    3. Determine acceptance criteria for low inoculation level replicates

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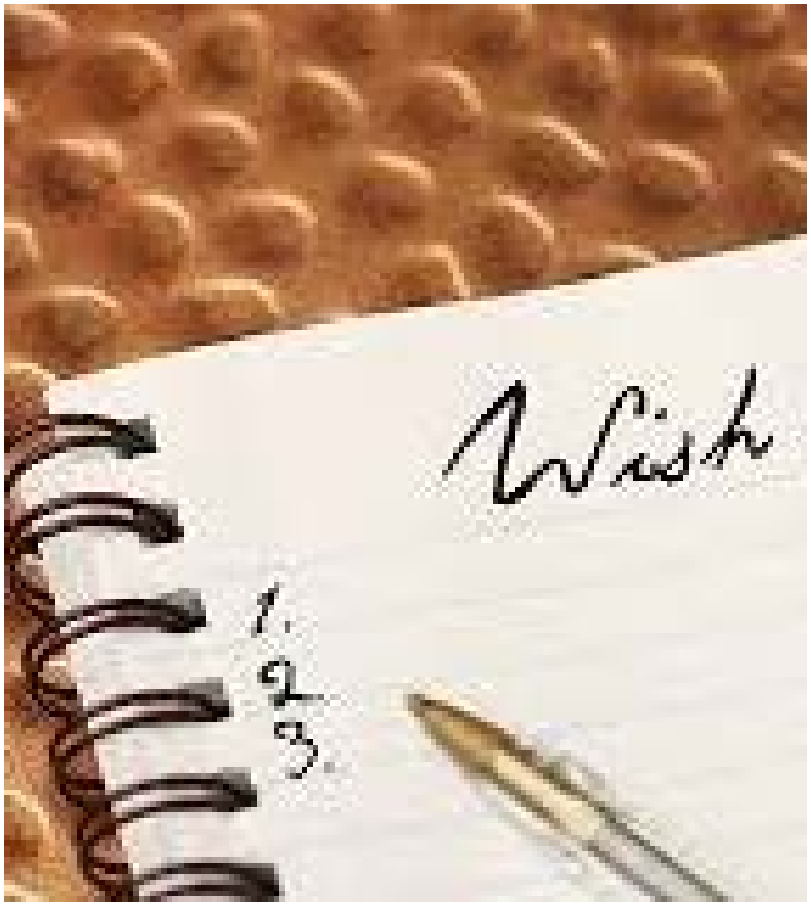
Food Allergen Working Group (2016)

- Advisory Council determined the following priority allergens in food (food will be defined in the standard)
  1. Eggs
  2. Milk
  3. Peanut
  4. Tree nut (hazelnut, almond)
  5. Celery
  6. Mustard
  7. Gluten
- Quantitative and Qualitative methods
- Next generation of harmonization…..

HARMONIZATION- WHY?

- **Benefits for Stakeholders**
  - Additional ISO validation initiatives from US Method Developers
  - Potential increase in OMA Method due to combined study design
  - Align with ISPAM Initiatives- Harmonization of Salmonella reference methods
- **Established Scope**
  - Deliverable Timeline
    - 9-12 months vs typical 12-24 months
- **Future Objectives**
  - Use as a guideline for expanding Harmonization beyond AOAC and ISO
  - Pave the way for emerging technologies
    - Proteomic
    - Genomic



Next steps

- Continued activity of Harmonization, Food Allergen and Statistical WG
- Call for Methods
- Promoting new members to diversify the expertise throughout ISPAM

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International Organization for Standardization

INTERNATIONAL STAKEHOLDER PANEL ON ALTERNATIVE METHODS (ISPAM)

Outcomes and Future Work

DeAnn Benesh

IAFP ISPAM Webinar

26 October 2018

Harmonize

Action or process of making something consistent or compatible.

"the economic group founded to harmonize national development plans"

"efforts to harmonize X country's regulations with international standards"

Synonyms:

coordinate · systematize · correlate · match · integrate · synchronize · homogenize · bring together · make consistent · bring in line (with) · bring in tune (with)

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Certification Bodies and Validation Guidelines

AOAC Research Institute

AOAC INTERNATIONAL ***Methods Committee Guidelines for Validation of Microbiological Methods for Food and Environmental Surfaces*** **(2012)**

- ***Performance Tested Method℠***
- ***Official Method of Analysis℠***
- ***Harmonized Method***

AOAC RESEARCH INSTITUTE

Certification to ISO 16140-2:2016

Protocol for the validation of alternative (proprietary) methods against a reference method

- ***NordVal Certification***
- ***MicroVal Certification***
- ***NF Validation via AFNOR Certification***

MICROVAL

European validation and certification organisation

NordVal International

N NordVal

AFNOR CERTIFICATION NF VALIDATION

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3M

ISO 16140-2:2016 and AOAC TB 02MAY2016

Table A. 1: Classification of sample types & suggested target combinations for validation studies

CATEGORIES					
Raw Milk & Dairy Products	Heat Processed Milk & Dairy Products	Raw meat & Ready-to-cook meat products (except poultry)	Ready-to-eat, ready-to-reheat meat products	Raw Poultry & ready-to-cook poultry products	Ready-to-eat, ready-to-reheat meat poultry products
Eggs & egg products (derivatives)	Raw & ready-to-cook fish & seafoods (unprocessed	Ready-to-eat, ready-to-reheat fishery products	Fresh produce & fruits	Processed fruits & vegetables	Dried cereals, fruits, nuts, seeds and vegetables
Infant formula & infant cereals	Chocolate, bakery products & confectionary	Multi-component foods or meal components	Primary production samples	Pet food & animal feed	Environmental samples (food or feed production

There are 18 CATEGORIES recognized and harmonized between ISO & AOAC

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Method Comparison Study

AOAC Research Institute

Method Developer Laboratory

- Inclusivity /Exclusivity
- Matrix Study – ***inoculated***

Performance Tested Method℠ (PTM)

- **Independent Laboratory**
- 20% Foods /surfaces repeated

ISO Certification Body

Expert Laboratory

- Inclusivity /Exclusivity
- Matrix study – ***natural (+stressed)***

Inter-Laboratory Study (ILS)

AOAC® *Official Method of Analysis*℠

- 1 + matrices (depending on claims)
- 3 levels of contamination
- Samples sent in blind duplicate

Certification (ISO)

- 1 Food matrix
- 3 levels of contamination
- Samples send in blind duplicate

Repeatability

ILS study – 10 labs QUALitative / 8 labs QUANTitative

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AOAC Harmonization with Other Certification Schemes

AOAC OMA + MicroVal, or AFNOR, (or NordVal?)

- Allows performance of one large study rather than two separate
- Use common expert reviewers
- *Each validating organization retains its own acceptance criteria*

AOAC RESEARCH INSTITUTE

MICROVAL
European validation and certification organisation

BY AFNOR CERTIFICATION NF VALIDATION EN ISO 16140

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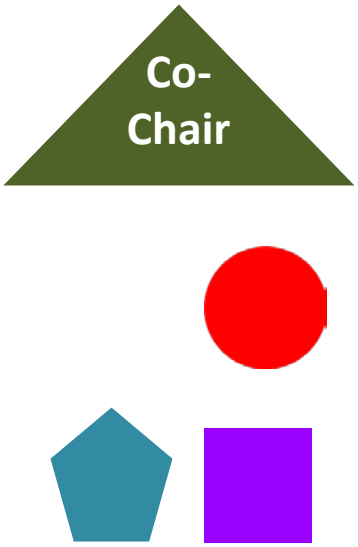
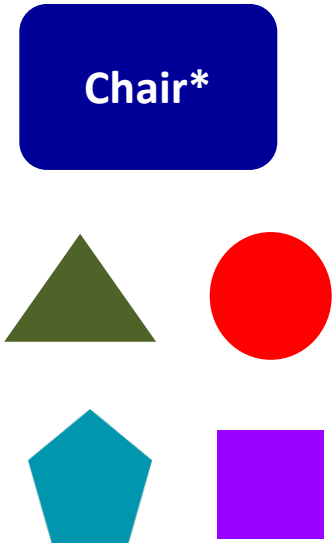
International Organization for Standardization

Certification Body Technical Review Committees

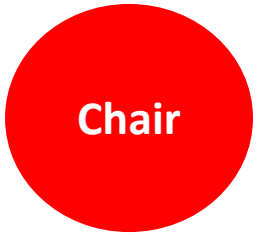
AOAC Expert Review Panel



MicroVal Technical Committee



AFNOR Technical Committee



* ISO TC34/SC9/**Chair** WG3: Methods

European Commission Regulation

COMMISSION REGULATION (EC) No 2073/2005
of 15 November 2005
on microbiological criteria for foodstuffs

Next Directive 2073 Update:

- validated for the food category(s) specified
- verified by the user
- certified by an *independent* Certification body
- subject to reassessment through renewal procedures ≤ 5 years
- summary or reference to validation results of proprietary method
- statement on the QMS of the production process of the method

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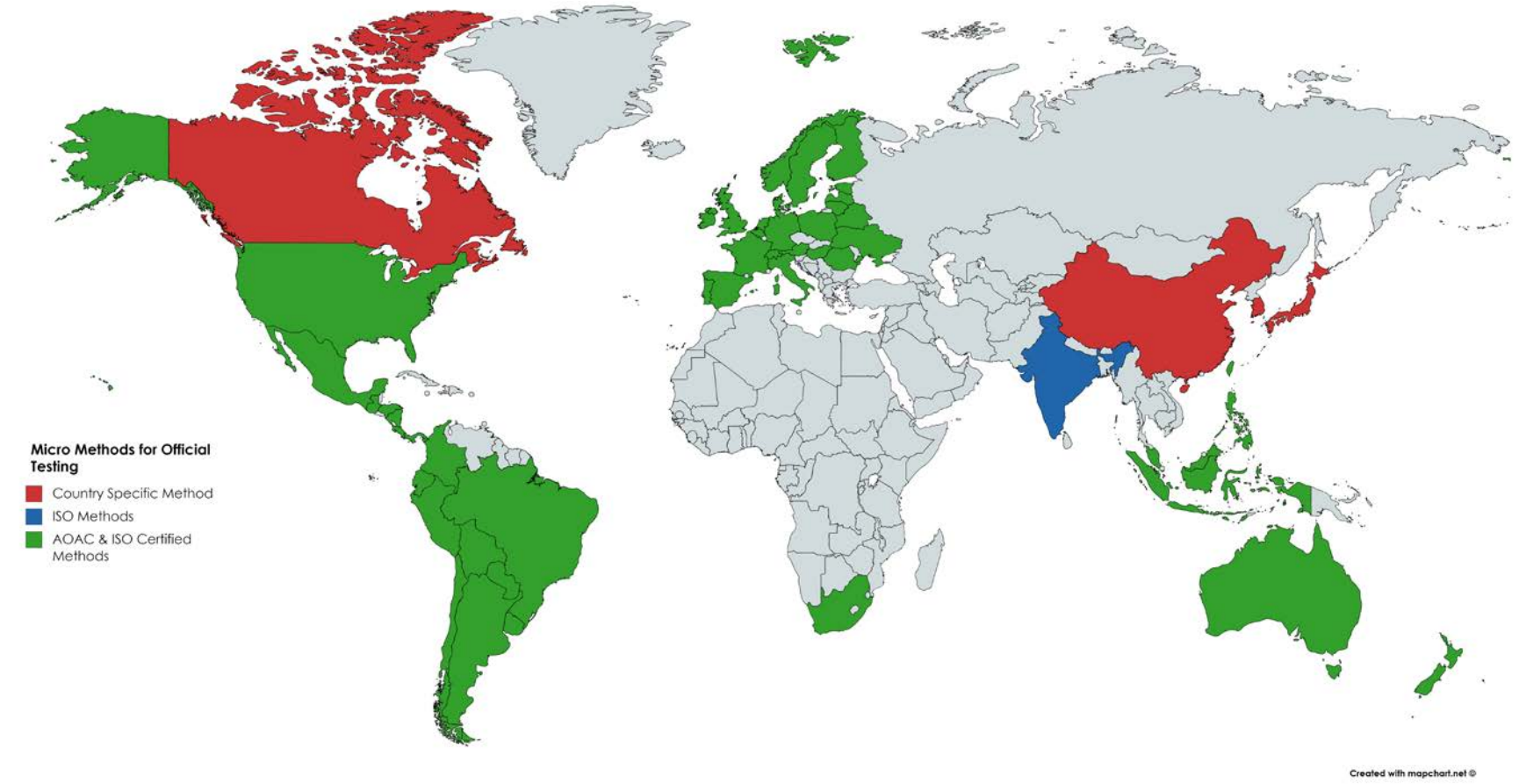
Alternative Micro Method use for Official Testing



ISO/TC 34/WG 14	Vitamins, carotenoids and other nutrients
ISO/TC 34/WG 16	Animal welfare
ISO/TC 34/WG 17	Water activity
ISO/TC 34/WG 18	Natural food ingredients
ISO/TC 34/WG 20	Aflatoxins
ISO/TC 34/WG 21	Social responsibility/sustainability
ISO/TC 34/WG 22	Natural antimicrobial
ISO/TC 34/SC 2	Oleaginous seeds and fruits and oilseed meals
ISO/TC 34/SC 3	Fruits and vegetables and their derived products
ISO/TC 34/SC 4	Cereals and pulses
ISO/TC 34/SC 5	Milk and milk products
ISO/TC 34/SC 6	Meat, poultry, fish, eggs and their products
ISO/TC 34/SC 7	Spices, culinary herbs and condiments
ISO/TC 34/SC 8	Tea
ISO/TC 34/SC 9	Microbiology
ISO/TC 34/SC 10	Animal feeding stuffs
ISO/TC 34/SC 11	Animal and vegetable fats and oils
ISO/TC 34/SC 12	Sensory analysis
ISO/TC 34/SC 15	Coffee
ISO/TC 34/SC 16	Horizontal methods for molecular biomarker analysis
ISO/TC 34/SC 17	Management systems for food safety
ISO/TC 34/SC 18	Cocoa
ISO/TC 34/SC 19	Bee products

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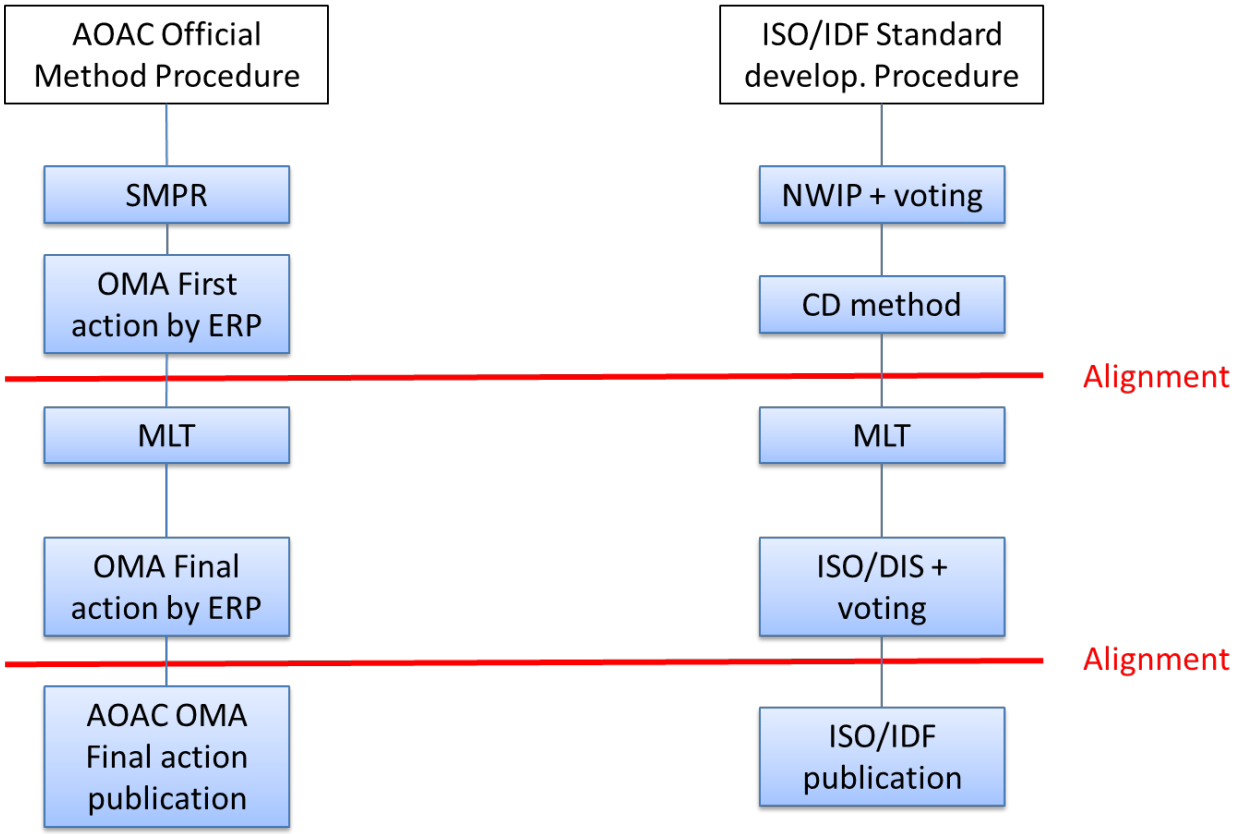
AOAC/ISO Cooperative Agreement

AOAC/ISO 2013-18:
Chemistry methods within **TC 34 (Food);**
SC 5: Milk and milk products

Stakeholder Panel for Infant Formula & Adult Nutritionals (SPIFAN)

Each Organization keeps own standard development procedure, but aligns at critical points, to harmonize



Importance of Codex Endorsement

Protecting Consumer Health

Facilitate food trade

In 1994, WTO Agreements on Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT), established **CODEX Alimentarius as the relevant standard-setting organization for food safety**, and emphasized on the importance of **international** standards.

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CODEX Committee on Methods of Sampling and Analysis (CCMAS)

Joint CODEX AOAC/ISO (IDF) methods as of July 2018

AOAC 2011.10 / ISO 20634	Infant formula and adult nutritionals -- Determination of vitamin B12 by reversed phase high performance liquid chromatography (RP-HPLC)
AOAC 2011.18 / ISO 20637	Infant formula and adult nutritionals -- Determination of myo-inositol by liquid chromatography and pulsed amperometry
AOAC 2011.19 / ISO 20649 | IDF 235	Infant formula and adult nutritionals -- Determination of chromium, selenium and molybdenum -- Inductively coupled plasma mass spectrometry (ICP-MS)
AOAC 2011.20 / ISO 20638	Infant formula -- Determination of nucleotides by liquid chromatography
AOAC 2012.10 / ISO 20633	Infant formula and adult nutritionals -- Determination of vitamin E and vitamin A by normal phase high performance liquid chromatography
AOAC 2012.13 / ISO 16958 | IDF 231	Milk, milk products, infant formula and adult nutritionals -- Determination of fatty acids composition -- Capillary gas chromatographic method
AOAC 2012.15 / ISO 20647 | IDF 234	Infant formula and adult nutritionals -- Determination of total iodine -- Inductively coupled plasma mass spectrometry (ICP-MS)
AOAC 2012.16 / ISO 20639	Infant formula and adult nutritionals -- Determination of pantothenic acid by ultra high performance liquid chromatography and tandem mass spectrometry method (UHPLC-MS/MS)
AOAC 2012.22 / ISO 20635	Infant formula and adult nutritionals -- Determination of vitamin C by (ultra) high performance liquid chromatography with ultraviolet detection ((U)HPLC-UV)
AOAC 2016.03 / ISO 21422 | IDF 242	Milk, milk products, infant formula and adult nutritionals -- Determination of chloride -- Potentiometric titration method
AOAC 2016.05 / ISO 20636	Infant formula and adult nutritionals -- Determination of vitamin D by liquid chromatography-mass spectrometry

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ISO International Organization for Standardization

AOAC-ISO Agreement

5-year Agreement
renewed
22 October 2018
- extended to include projects within the scope of ISO TC34

To collaborate in joint development & approval of common standards

- **Harmonization increases global relevance**
- **Avoid duplication of work**

ISO/TC 34/WG 14	Vitamins, carotenoids and other nutrients
ISO/TC 34/WG 16	Animal welfare
ISO/TC 34/WG 17	Water activity
ISO/TC 34/WG 18	Natural food ingredients
ISO/TC 34/WG 20	Aflatoxins
ISO/TC 34/WG 21	Social responsibility/sustainability
ISO/TC 34/WG 22	Natural antimicrobial
ISO/TC 34/SC 2	Oleaginous seeds and fruits and oilseed meals
ISO/TC 34/SC 3	Fruits and vegetables and their derived products
ISO/TC 34/SC 4	Cereals and pulses
ISO/TC 34/SC 5	Milk and milk products
ISO/TC 34/SC 6	Meat, poultry, fish, eggs and their products
ISO/TC 34/SC 7	Spices, culinary herbs and condiments
ISO/TC 34/SC 8	Tea
ISO/TC 34/SC 9	Microbiology
ISO/TC 34/SC 10	Animal feeding stuffs
ISO/TC 34/SC 11	Animal and vegetable fats and oils
ISO/TC 34/SC 12	Sensory analysis
ISO/TC 34/SC 15	Coffee
ISO/TC 34/SC 16	Horizontal methods for molecular biomarker analysis
ISO/TC 34/SC 17	Management systems for food safety
ISO/TC 34/SC 18	Cocoa
ISO/TC 34/SC 19	Bee products

2018 AOAC/ISO Cooperative Agreement

AOAC/ISO 2018-23:

TC 34: Food

SC 9: Microbiology

WG: Methods

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ISO International Organization for Standardization

Micro Methods in CODEX?

Chemistry

Methods of Sampling & Analysis

1. Serve as a CODEX coordinating body with other international groups working in meth… and sampling
2. Specify Reference Me… Sampling appropriate …
3. Consider, amend, and e…
   a) residues of pesticide…
   b) micro biological quali…
   c) specifications for food …itives
4. Elaborate sampling plans and procedures
5. *Define procedures, protocols, guidelines for the assessment of food laboratory proficiency, and quality assurance systems for laboratories.*

Microbiology

…Hygiene

…n food hygiene

…giene contained in Codex …

…e applicable to specific …od groups

…sider specific hygiene problems assigned to it by the Commission

5. Suggest and prioritize areas where there is a need for microbiological risk assessment and develop questions to be addressed by the risk assessors
6. Consider microbiological risk management matters in relation to food hygiene and in relation to the risk assessment of FAO and WHO

Writing a "position paper" to include pesticides, drugs and micro methods for discussion at next CCMAS

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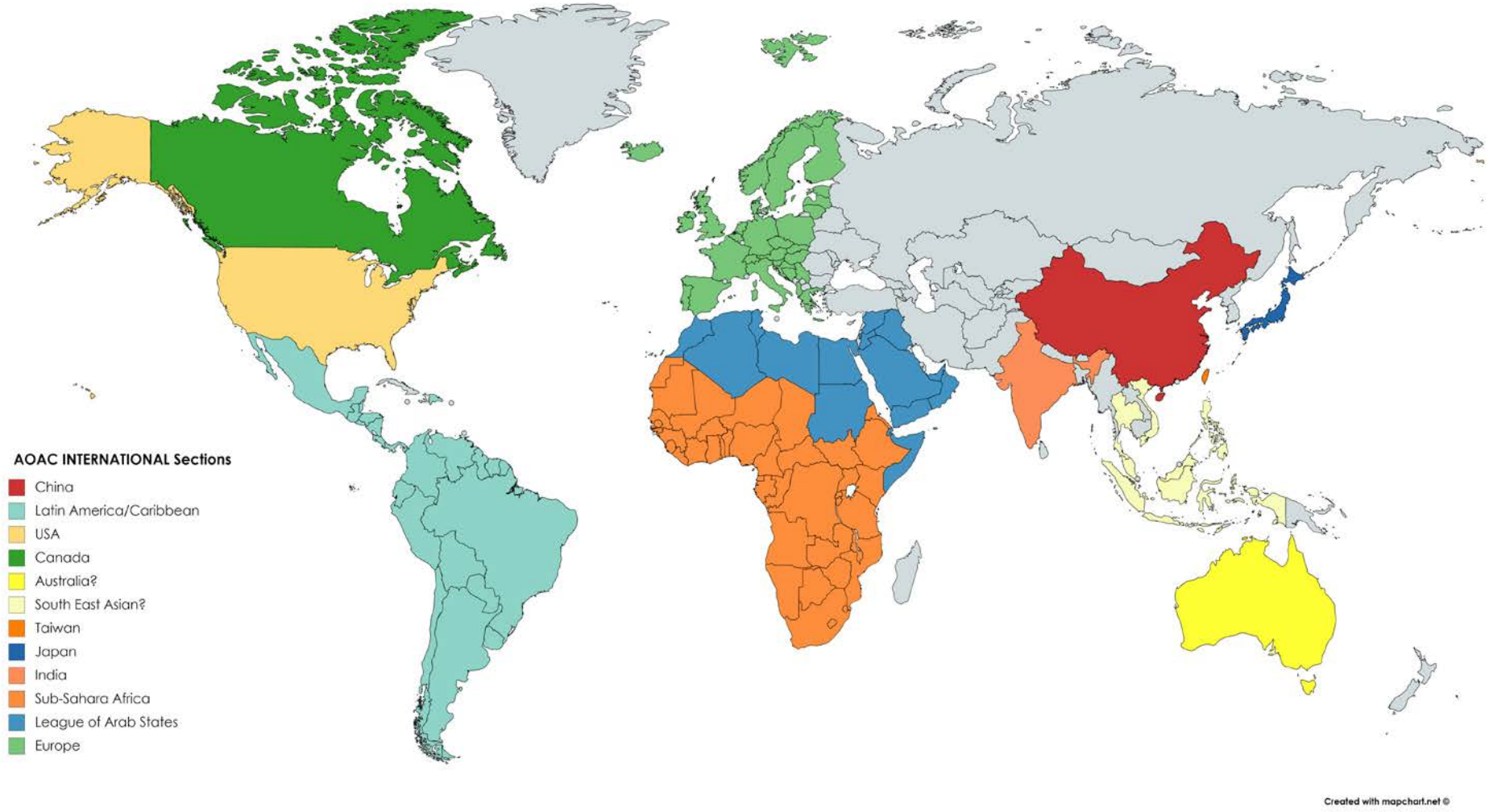
17 AOAC Sections



Section Activities

- **Establish regional platform**
  - Bring together regional scientists
  - Discuss local regulatory issues
- **Participate in Standard Development**
  - Provide regional input on requirements
  - Bring regional stakeholders to Panel
- **Harmonize local with International methods**
  - Capacity building workshops
  - Local matrix validation extensions for OMAs

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AOAC 2011.10
Vitamin B12 in Infant Formula
– *Extension for Indian Matrices*

AOAC INTERNATIONAL INDIA SECTION

- Infant formula and adult nutrition products in India contain:
  - malt and cereals, apart from milk and soy, and *were not a part of this study*
- Extend the original AOAC 2011.10 method for Indian matrices:
  - determined the method was fit for purpose
  - Required new procedure to address matrix interference

QUESTIONS?

THANK YOU

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Slides and a recording of this webinar will be available for access by IAFP members at www.foodprotection.org within one week.