

2024 AOAC SEA Section 3rd ANNUAL CONFERENCE



“Bringing together government, industry, and academia to advance analytical excellence for food safety”



16-17 October 2024

**Acacia Hotel, Alabang,
Metro Manila, Philippines**

CONFERENCE PROGRAM BOOK

Welcome to the 2024 AOAC SEA 3rd Annual Conference on **Bringing together government, industry, and academia to advance analytical excellence for food safety**. We hope you have a good knowledge sharing and networking opportunity so that together we can drive the development of analytical competence and capability through mutual recognition and improve the standards and performance of analytical science. This conference is co-organized by the **Department of Science and Technology - Industrial Technology Development Institute (DOST-ITDI)**.

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TECHNICAL BRIEFING



Please put your phone on vibration mode and use the area outside the ballroom for urgent calls.



Q&A sessions will be at the end of each presentation and are approximately 2 minutes long.



Please be mindful of time and return to the conference area on time.



We hope you have a great time networking and finding collaboration opportunities with the community.



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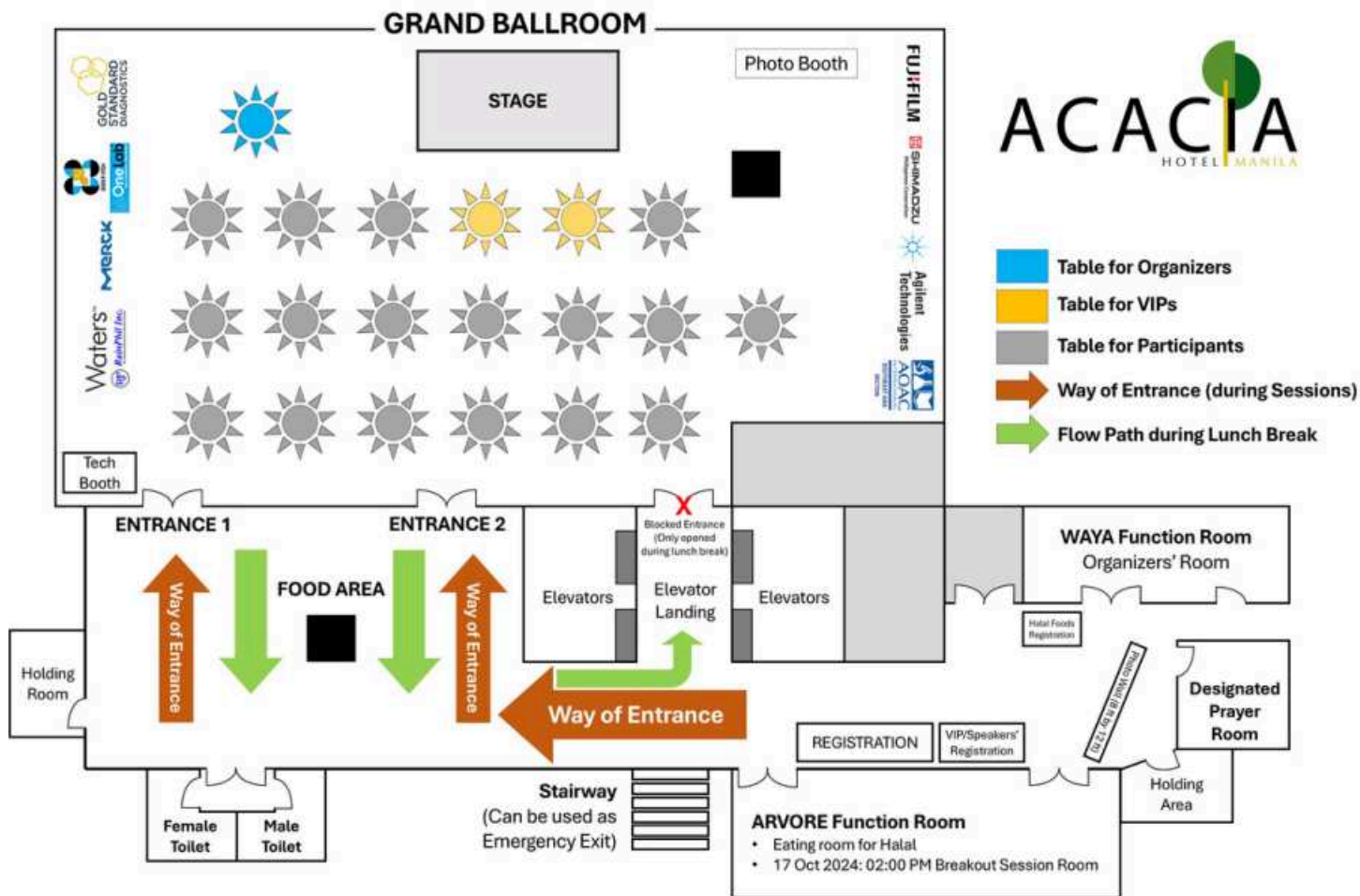


CONFERENCE VENUE LAYOUT

The conference will take place at **Level 2**, in the **Grand Ballroom** (Main Session & Pesticide Breakout Session) and the **Arvore Function Room** (Student Awards Breakout Session).

Coffee breaks and lunch will be served in the food area outside the **Grand Ballroom**.

Halal food registration is located outside the **WAYA Function Room**. Participants who require Halal meals can use the **Arvore Function Room** during the lunch break.



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Grand Ballroom

Time	Content	Speaker
7:30 - 8:30	Registration	
8:30 - 8:43	<i>Welcome Speech by AOAC SEA</i>	Dr. Xinping Hou , President, AOAC SEA
8:43 - 8:56	<i>Welcome Speech by DOST-ITDI</i>	Dr. Annabelle V. Briones, CESO III , Director, DOST-ITDI, Philippines
8:56 - 9:10	<i>Opening Message from Philippines' Department of Agriculture</i>	Mr. Noel A. Padre , Assistant Secretary for Planning and Project Development, Department of Agriculture, Philippines
9:10 - 9:40	<i>Keynote Speech</i> The Filipino Initiatives on Food Safety and Security through Science, Technology, and Innovation	Dr. Renato U. Solidum Jr. , Secretary, Department of Science and Technology (DOST), Philippines
9:40 - 10:10	<i>Keynote Speech</i> Current and New AOAC INTERNATIONAL Scientific Initiatives	Dr. Katerina (Kate) Mastovska , Deputy Executive Director and Chief Science Officer, AOAC INTERNATIONAL, USA
10:10 - 10:40	Coffee Break (Outside Grand Ballroom)	
10:40 - 11:05	<i>Waters Corporation</i> New Era HPLC for Routine Labs: A Focus on Food Labelling and Histamine Testing	Dr. Wenlin Zhang , Team Leader, Applications and F&E Market Development, Waters Corporation, Singapore
11:05 - 11:30	Ethylene Oxide Residue Analysis	Dr. Katerina (Kate) Mastovska , Deputy Executive Director and Chief Science Officer, AOACI, USA
11:30 - 11:55	Measurement of Cyanide and Cyanoglycoside Content in Cassava	Dr. Deni Taleski , Technical Development Officer, National Measurement Institute, Australia
11:55 - 12:20	<i>Gold Standard Diagnostics</i> Quantitative Validation of Allergen Lateral Flow Devices	Mr. Yan Zhi Tan , Application Specialist, Gold Standard Diagnostics
12:20 - 12:40	Appreciation	
12:40 - 14:10	Lunch (Grand Ballroom; buffet)	
14:10 - 14:35	<i>Merck</i> Bigger is Better: Updated ISO Regulations for Testing Large Sample Sizes by Assurance® GDS	Mr. Andrew Lienau , Food Regulatory and Validation Senior Expert, MilliporeSigma, USA
14:35 - 15:00	Determining Laboratory Competence by Proficiency Testing for Food Microbiological Analysis	Mr. Marlon S.A. Aguinaldo , Supervising Science Research Specialist & Head of the Biological Laboratory, Standards and Testing Division, DOST-ITDI
15:00 - 15:25	HSA's Work on Insect-based Certified Reference Materials – Supporting Food Safety and Security	Dr. Benny Tong Meng Kiat , Senior Analytical Scientist, Health Sciences Authority, Singapore
15:25 - 15:50	The Concepts and Applications of Detection Limit in Chemical Residual Analysis	Mr. Guan Huah Yeoh , External Lead Assessor and Technical Assessor of SAC-SINGLAS; Senior Partner, GLP Consulting, Singapore
15:50 - 16:10	Appreciation	
16:10 - 16:40	Coffee Break (Outside Grand Ballroom)	
16:40 - 17:05	PFAS Analysis in Food and Food Contact Materials	Dr. Katerina (Kate) Mastovska , Deputy Executive Director and Chief Science Officer, AOAC INTERNATIONAL, USA
17:05 - 17:30	Optimized Methods for Sensitive and Good Recovery PFAS Analysis of Fish and Vegetable Oil	Mr. Dwi Yulianto Laksono , General Laboratory Manager, SIG Laboratory, Indonesia
17:30 - 17:55	MOSH/MOAH Analysis in Foods: A Review on Regulations, Testing Methods, and Food Supply Chain Mitigation	Dr. Huei Hong Lee , Co-chair of Emerging Issues Working Group, AOAC SEA
17:55 - 18:20	Significance of the Establishment of Metrological Traceability for Testing Histamine in Fish and Fish Products in Southeast Asia	Ms. Alleni T. Junsay , Supervising Science Research Specialist, National Metrology Laboratory, DOST-ITDI
18:20 - 18:40	Appreciation	
18:40 - 21:00	Networking & Appreciation	

Grand Ballroom

Time	Content	Speaker
7:30 - 8:30	Registration	
8:30 - 8:55	Chemical Migration from Food Packaging: Safety Implications and Current Challenges	Dr. Hayati Samsudin , Assistant Professor, Food Technology Division, School of Industrial Technology, Universiti Sains Malaysia
8:55 - 9:20	Limitations of Current Analytical Reference Methods to Determine Vitamins in Foods: Challenges to Support Regulatory Compliance and Nutritional Composition Data	Dr. Erik Konings , Consultant, the Netherlands
9:20 - 9:45	Updates from AOAC SEA Working Group on Pesticide Residues in Culinary Herbs and Spices	Ms. YiFan Jiang , Co-chair of Working Group on Pesticide Residues Analysis in Culinary Herbs and Spices, AOAC SEA
9:45 - 10:10	The Microbiologist's Guide to AOAC Method Validation: An Overview of Appendix J (Virtual)	Ms. Erin Crowley , Chief Scientific Officer, Q Laboratories, USA
10:10 - 10:30	Appreciation	
10:30 - 11:00	Coffee Break (Outside Grand Ballroom)	
11:00 - 11:10	Upcoming Collaborative Studies at AOACI on Contaminants	Dr. Erik Konings , Consultant, the Netherlands
11:10 - 11:35	Development and Validation of Test Method for Parabens in Sauces	Ms. Ma. Rachel V. Parcon , Chief Science Research Specialist, Standards and Testing Division, DOST-ITDI
11:35 - 12:00	Microbiological Hazard Risk Assessment for Cultured Meat/Alternative Proteins (Virtual)	Dr. Dean Powell , Senior Scitech Analyst, The Good Food Institute Asia Pacific
12:00 - 12:25	<i>Salmonella</i> and <i>Staphylococcus aureus</i> : Pathogenicity and food poisoning	Mr. Thanh Nguyen-Tuan , Vietnam Center for Food Safety Risk Assessment (VFSA), National Institute for Food Control (NIFC), Ministry of Health, Vietnam
12:25 - 12:40	<i>Fujifilm</i> Introduction of analytical standards and certified reference materials (CRMs) for elemental analysis, PFAS, nitrosamine, pesticide residue, quantitative NMR (qNMR), etc.	Dr. Toru Miura , Manager (Head of Reference Material Group), FUJIFILM Wako Pure Chemical Corporation
12:40 - 13:00	Appreciation	
13:00 - 14:15	Lunch (Grand Ballroom; Buffet)	
14:15-16:30 <i>Parallel Sessions</i>	<p>Breakout Session for Pesticide Residue Analysis in Culinary Herbs and Spices <i>Location: Grand Ballroom</i></p> <p>Multi-Stakeholder Perspectives on Managing Pesticide Residues in Culinary Herbs and Spices</p> <p>Objectives:</p> <ul style="list-style-type: none"> A deep dive into AOAC-SEA's new project on harmonization of analytical methods for multiresidue analysis of pesticide residues in spices and herbs Importance of good regulatory practices in ensuring safe trade and MRL setting Addressing the technical challenges in pesticide residue analysis in different food matrices Addressing the need for methods harmonization for pesticide residue analysis in ASEAN region CODEX - MRL setting for spices using the residue data from SEA labs 	<p>Breakout Session for 2024 Student Award Presentation <i>Location: Arvore Function Room</i></p> <p>Promoting Analytical Excellence in Food Safety and Quality in Academia by Supporting Young Scientists</p> <p>Student Awardees:</p> <ul style="list-style-type: none"> Ms. Kirthana Kathirawan Ms. Kristelle Mae Tardecilla Mr. Muhammad Raznisyafiq bin Razak Ms. Norfarizah Hanim Hassan Mr. Ramon Arvin Noriel Santos Mr. Sotheaboreach Ham (unable to attend)
16:30 - 17:00	Coffee Break (Outside Grand Ballroom)	
17:00 - 17:10	AOAC SEA at 2025	

Breakout Session for Pesticide Analysis, Grand Ballroom

Moderator: Dr. Sasi Rajendran, Asia Regional Manager, Minor Use Foundation

Time	Content	Speaker
14:15 - 14:25	Welcome & Introduction	Dr. Sasi Rajendran , Asia Regional Manager, Minor Use Foundation
14:25 - 14:40	Current Regulatory Landscape for Pesticide Residues in Culinary Herbs and Spices: Efforts in International Harmonization	Ms. Kriz Minguez , Chemist IV, Assistant Division Chief, Fertilizer and Pesticide Authority, Philippines
14:40 - 14:55	Principles of MRL Establishment and Implementation	Ms. Veronica Picado , Director - Technical Operations, Minor Use Foundation
14:55 - 15:10	Monitoring Pesticide Residues in Agricultural Commodities - Current Advancements and Challenges	Mr. Mark Kenneth C. Gonzales , Chemist III, Plant Product Safety Services Division, Bureau of Plant Industry, Department of Agriculture, Philippines
15:10 - 15:25	A Deep Dive Into the Issues and Opportunities Raised From AOAC-SEA Working Group on Pesticide Residue in Culinary Herbs and Spices	Ms. YiFan Jiang , Co-chair of Working Group on Pesticide Residues Analysis in Culinary Herbs and Spices, AOAC SEA
15:25 - 15:40	Standardization in Pesticide Residue Monitoring and Testing	Dr. Kaushik Banerji , Director, ICAR-National Research Centre for Grapes
15:40 - 16:25	Panel Discussion Q&A with audience	Ms. Kriz Minguez Ms. YiFan Jiang Ms. Veronica Picado Mr. Mark Kenneth C. Gonzales Dr. Kaushik Banerji
16:25 - 16:30	Closing	Dr. Sasi Rajendran , Asia Regional Manager, Minor Use Foundation

Breakout Session for Student Presentation, Arvore Function Room

Training of Young Scientists Working Group (ToYS WG), AOAC SEA

Time	Content	Speaker
14:15 - 14:25	Opening of the Session. Announcement of the winners	Dr. Jianhong Ching , ToYS WG
14:25 - 14:45	3D-Integrated Membrane Protected Micro-Solid-Phase Extraction of Sulfonamides in Food Samples: An Innovative Approach	Ms. Kirthana Kathirawan , Graduate Student, Universiti Malaya
14:45 - 15:05	Evaluation Of Inhibitory, Immunomodulatory, Survival, and Growth Effects of Host-Derived <i>Weissella Confusa</i> on <i>Macrobrachium Rosenbergi</i> Challenged with <i>Vibrio Parahaemolyticus</i>	Ms. Kristelle Mae Tardecilla , Graduate Student, University of Santo Tomas
15:05 - 15:25	Acute Toxicity and Risk Assessment of Endocrine Disrupting Compounds (EDCs) in Tropical Freshwater Cladocerans <i>Moina micrura</i>	Mr. Muhammad Raznisyafiq bin Razak , Graduate Student, Universiti Putra Malaysia
15:25 - 15:45	Authenticity and Quality Assessment of Malaysian Stingless Bee Honey: Paving the Path towards the Next Superfood	Ms. Norfarizah Hanim Hassan , Graduate Student, Universiti Sains Malaysia
15:45 - 16:05	Formulation of a Phage Cocktail for Biocontrol Applications against <i>Listeria monocytogenes</i> and <i>Salmonella enterica</i> ser. Typhimurium in Raw Meat Samples	Mr. Ramon Arvin Noriel Santos , Graduate Student, University of Santo Tomas
16:05 - 16:15	Award Presentation Ceremony	ToYS WG



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- Indicator Organisms
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Environmental contamination by per- and polyfluoroalkyl substances (PFAS) and rising concerns about its long-term impacts on the general population, have increased the urgency for wider PFAS analysis. Initially the focus was solely on environmental matrices but has now expanded into food analysis due to the risk to consumers. Accordingly, regulations and guidance documents have been released to assure the quality of water bodies, drinking water and most recently for food and feed. Here we describe the workflow of our sample-to-result approach for PFAS analysis that can be incorporated into any lab whether the focus is food, water or environmental.

[Download PFAS Application Notebook](#)



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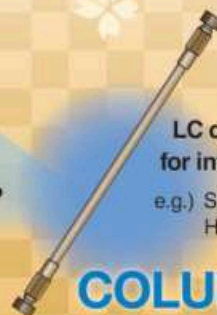
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SCAN ME

AOAC SEA New Working Group

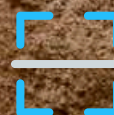
**Pesticide multiresidue analysis
in spices and culinary herbs**

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Register your interest by completing form (Scan QR code please)



Recognitions by AOAC INTERNATIONAL



**AOAC SEA honored with
SECTION OF THE YEAR AWARD at
the AOAC INTERNATIONAL 2024
Annual Meeting**

*Photo: Dr. Erik Konings, AOAC SEA
Mentor, & Dr. Qi Lin, AOAC SEA ToYS
WG Chair & former Treasurer*

Rockville, Maryland, September 24, 2024—AOAC INTERNATIONAL honored analytical science leaders in an awards ceremony at the AOAC INTERNATIONAL 2024 Annual Meeting & Exposition in Baltimore, Maryland, on Monday, August 26.

The **Section of the Year Award** was presented to the AOAC Southeast Asia Section. The Section was recognized for facilitation of multiple initiatives throughout the year, communication across various platforms, recruitment, and service to the Association. Sections provide opportunities for participants to share information, build professional contacts, expand leadership skills, and gain practical management experience. There are 15 AOAC Sections that connect analytical communities in the U.S. and worldwide, representing four continents and more than 120 countries.

The Southeast Asia Section continues to grow and is managed by a dedicated group of thought leaders who are instrumental in its success and efficient operation. The Section strongly focuses on Organizational membership recruitment and has seen rapid growth over two years. The Section utilizes a network to recruit subject matter experts globally for new standards development initiatives and focuses on collaboration with AOAC INTERNATIONAL.

The Southeast Asia Section offers a high-quality and relevant scientific program for its annual meetings, which are always well-attended. In addition, Section meetings are well-sponsored due to good relationships with vendors and Organizational members.

The Section fosters valuable connections through its communication strategy and facilitates collaboration between Section members from various countries.

The highest volunteer award bestowed by AOAC, the **William Horwitz Award**, recognizes extraordinary service to the Association. The seldom nominated William Horwitz Award was presented to Erik J.M. Konings, who has extensive experience in development of methods of analysis for vitamins in food and food products. A member since 1997, Konings is highly active in AOAC, joining the Board of Directors in 2011 and serving as president in 2014. He has also been a member and served as chair for multiple AOAC expert review panels and working groups.

A member since 1997, Konings is highly active in AOAC, joining the Board of Directors in 2011 and serving as president in 2014. He has been a member and served as chair for multiple AOAC expert review panels and working groups, including AOAC Stakeholder Program on Infant Formula and Adult Nutritionals (SPIFAN), Stakeholder Program on Strategic Food Analytical Methods, PFAS, and Food Nutritionals and Food Contaminants. Konings is part of the AOAC Delegation to champion SPIFAN methods for consideration of Codex adoption as international standards and serves as liaison between Codex and AOAC INTERNATIONAL through his work with ISO TC 34/SC 5 for milk products.

His efforts to foster AOAC's international presence also extends to Sections. He is co-chair of the Committee on Sections, mentor and founding member of the AOAC Africa, Southeast Asia, China, and India Sections, and has supported the revitalization of the AOAC Latin America Section. He is also the inaugural chair and a founding member of the AOAC Past Presidents Council.



**Dr. Erik Konings honored with
WILLIAM HORWITZ AWARD**

*This is the highest honor for
volunteers and rarely bestowed*

Cyanide in Cassava Project



Cassava is a staple food for around 600 million people in the tropics, but under environmental stress it produces cyanogenic glycosides that lead to KONZO disease, a permanent and incurable paralysis of the legs, particularly in children. As a consequence, most countries in the world have food safety regulations that limit the cyanide content in cassava and cassava products. Recently, however, the presence of cyanide in cassava and cassava products has also become a trade issue, with some imported products being rejected at the point of entry.



Following analytical issues arising from the import and export of cassava products, the **National Measurement Institute Australia (NMIA)**, the **Southeast Asia Section of AOAC INTERNATIONAL (AOAC SEA)**, the **Asia Pacific Food Analysis Network (APFAN)** and the **Pacific Quality Infrastructure Initiative (PQII)** instigated a 'Cassava Round Robin' to investigate the various methods of analysis used in the Asia Pacific region and the results obtained from these methods.

The results obtained are extremely variable, ranging from <0.01 mg/kg to 150 mg/kg. The immediately obvious conclusion is that this variation is not acceptable, not only in terms of international trade, but also from a food safety perspective. The solution for this would be to decide upon a method that could be put forward as a standard method that is used internationally, that defines the analyte and that is able to demonstrate adequate accuracy, precision and robustness.

Further work and funding are required to investigate the methodological differences in order to arrive at a suitable analytical method that can be recommended for use around the world. Such a method could be adopted as an AOAC INTERNATIONAL Official Method of Analysis (OMA) and would significantly reduce any trade disputes arising from the analysis of cyanide in cassava and cassava products. It would also assist in the improvement of health related complications due to the excessive consumption of cyanide in cassava products.

KONZO disease, a permanent and incurable paralysis of the legs, particularly in children

AOAC virtual work session on the needs for standard development to measure cyanide in cassava, cassava products and other food materials



 Annabelle Briones, Ph.D. DOST-ITDI, The Philippines, Director AOAC SEA HoMwG Chair	 Stewart Jones Asia Pacific Food Analysis Network, Coordinator AOAC SEA CBWG Co-chair	 Deni Taleski, Ph.D. National Measurement Institute, Australia, Technical Development Officer	 Patrick Mulder, Ph.D. Wageningen Food Safety Research (WFSR), The Netherlands; EURL on Mycotoxins & Plant Toxins, Research Scientist
 Xiping Hou, Ph.D. BV-AQ, Manager AOAC SEA President Chair	 Tetsuhisa Goto, Ph.D. Central Science Commerce Inc., Japan, Technical Advisor AOACI membership 1983; Chair for Method Committee D, 2004-2007	 Kate Mastovska, Ph.D. AOAC INTERNATIONAL, Deputy Executive Director & Chief Science Officer	 Erik Konings, Ph.D. Nestlé Institute of Food Safety and Analytical Sciences, Expert AOAC SEA Mentor AOACI Past President

The first virtual work session was conducted on 30 November 2023 with a panel of subject matter experts from Australia, the Netherlands, Japan, and the US. The event received 211 global registrants coming from governmental standard setting bodies, food safety authorities, manufacturers, testing laboratories, and more.

A round robin test was initiated afterwards to confirm result discrepancies among different methods before starting an AOAC standard development process.

Pesticide Multiresidue Analysis Project

AOAC SEA Working Group on Pesticide Multiresidue Analysis in Culinary Herbs and Spices



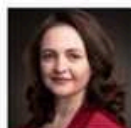
Yifan Jiang
Regional Regulatory Compliance Lead, AFAC
Clean Food Ingredients (CIFI)



Huy Tran
Laboratory Manager, Ho Chi Minh City Head Quarter
Eurofins Sao Ky Hai Group



Annabelle Briones, Ph.D.
DOST/ITDI, Director
AOAC SEA HAWWG Chair



Kate Mastovska, Ph.D.
AOAC INTERNATIONAL,
Deputy Executive Director &
Chief Science Officer



Eric Koenigs, Ph.D.
Nestle Institute of Food Safety and Analytical Sciences, Expert
AOAC SEA Member
Past President AOAC

The project was first introduced at AOAC SEA's 2nd Annual Conference



At the regional and international levels, the Harmonization of Methods Working Group aims to support Southeast Asian countries' global roles in food production, supply, and trade.

An outstanding initiative is the Pesticide Multiresidue Analysis in Culinary Herbs and Spices Sub-working Group introduced during the 2023 AOAC SEA 2nd Annual Conference.

Culinary herbs and spices play an important role in global food trade. The global market for spices is projected to grow from US\$ 17.75 billion in 2021 to US\$ 25.24 billion by 2029 (Source: Fortune Business Insights). However, the testing of pesticide residues in these commodities poses significant challenges to industry and regulatory authorities. Current testing methods, while effective, often lack the specificity and sensitivity required to accurately detect and quantify these residues at trace levels. Moreover, sample preparation and extraction had been found challenging due to the nature of the products in fine powdered forms in some cases. Consequently, there's a pressing need for a robust and standardized testing method that can reliably test for pesticide residues in culinary herbs and spices.

In a 2-year timeframe, the **AOAC SEA Working Group on Pesticide Multiresidue Analysis in Culinary Herbs and Spices** aims to achieve the following deliverables:

1. Prioritize key product categories and molecules of concern.
2. Develop an AOAC Official method (or a set of methods) to support multi-residue testing for pesticides that can be applied by the regulatory authorities and industries.
3. Develop a Guidance Document to address issues related to interpretation of test results.

Following the virtual Kick-off Meeting on April 18, 2024, the Working Group issued a Call for Data to prioritize candidate lists of pesticide residues, herbs, and spices for method development based on selection criteria such as non-conformity rate, food safety risk, and traded volume/value. Analytical and regulatory experts are reviewing and finalizing the list.

As part of the method identification process, MRL setting is important for Method Performance Requirement. To align with the conference theme, the Working Group along with the Minor Use Foundation hosts a Breakout Session on "Multi-Stakeholder Perspectives on Managing Pesticide Residues in Culinary Herbs and Spices". Stakeholders and experts will share their experiences and discuss challenges in analytical methods for key Culinary Herbs and Spices commodities and the higher level impact of un-harmonized methods in establishing CODEX MRL and international trade. **Please see the Conference Agenda for more details.**



Emerging Issues Working Group Activities



AOAC SEA's International Workshop on MOSH/MOAH Analysis in Foods was a resounding success, co-hosted with the Malaysian Palm Oil Board (MPOB) on August 27-28, 2024, in Bandar Baru Bangi, Malaysia.

The event attracted 90 participants from diverse sectors including government, palm oil industries, food ingredient companies, and analytical testing firms from Malaysia, Vietnam, Singapore, Indonesia, the Philippines, France, Germany, Switzerland, and China.

The **Emerging Issues Working Group** of AOAC Southeast Asia Section aims to identify and monitor emerging issues to forecast and predict possible food safety risks, and develop appropriate measures to manage the identified risks. Emerging Issues Expert Panels cover the following areas:

- Environmental/ Process Contaminants
- Inorganic Contaminants/ Heavy Metals
- Pesticides Residual Analysis
- Mycotoxins/ Plant Toxins
- Allergens
- Food Authentication
- Rapid Analysis Method/ Biosensor
- Novel or Future Food

Mineral oil saturated hydrocarbons (MOSH) and mineral oil aromatic hydrocarbons (MOAH) are aliphatic and aromatic hydrocarbons that can be carcinogenic and are of concern for food safety. The Emerging Issues Working Group of AOAC Southeast Asia section has brought together different stakeholders to review the latest status of MOSH/MOAH analysis in foods from different perspectives. **The talk will be delivered at 17:30 on the first day of the conference.**

Read the abstract for more.

Building on the success of the Mineral Oil Hydrocarbon Analysis topic, the Working Group will discuss **Other Emerging Contaminants** at the 2024 AOAC SEA 3rd Annual Conference.

The Working Group Chairs will outline the next steps for the group and seek to engage more partners, sponsors, and volunteers. A shortlist of select emerging contaminants will be presented, while remaining neutral and open to input from all interested parties on relevant topics that warrant the group's efforts.

Stay tune by attending the talk on MOSH/MOAH Analysis in Foods: A Review on Regulations, Testing Methods, and Food Supply Chain Mitigation or emailing to emerging.issues@aoac-sea.org.

2024 AOAC SEA 3rd Annual Conference



Dr. Huel Hong Lee
Emerging Issues Working Group Co-chair,
AOAC SEA

MOSH/MOAH Analysis in Foods: A Review on Regulations, Testing Methods, and Food Supply Chain Mitigation

With representatives from:



Including a Pesticide Workshop:



Training of Young Scientists Working Group Activities



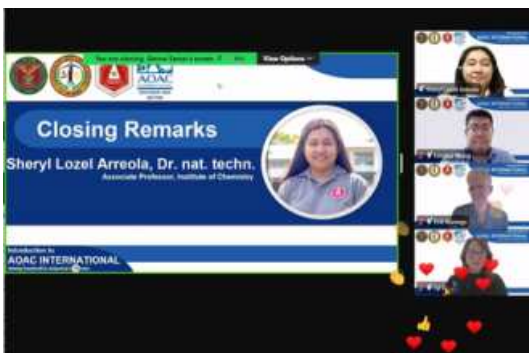
The objective of the Training of Young Scientists Working Group (ToYS WG) is to establish programs across Southeast Asia countries to develop, train, encourage, support, and recognize young scientists.

The **Student Awards Program** has been held alongside the AOAC SEA Annual Conferences. In 2022, it attracted 34 candidates from 7 member countries, including Cambodia. Three graduate students from high-income countries received awards, while an undergraduate from a lower-middle-income country earned a travel award to attend the conference in Singapore.



In 2023, the program transitioned to a poster competition format, generating 49 applications, with Indonesia participating for the first time. Twelve students were selected to present at the Annual Conference in Vietnam, and three were awarded the Best Student Poster Award.

In 2024, there was a significant increase, with 93 applicants from 8 countries: the Philippines, Malaysia, Thailand, Vietnam, Singapore, Cambodia, Indonesia, and Laos – a 90% rise from the previous year. Six outstanding students were selected, with five set to present in the Breakout Session. *For more details, please refer to the Conference Agenda.*



Participants have found the program to be enriching and empowering, allowing them to showcase their research and network with experts from academia, industry, and government.

Under the **University Engagement Program**, the Working Group hosted virtual career talks with Universiti Teknologi Malaysia (UTM) and Universiti Sains Malaysia (USM) in 2022 and 2023, engaging over 200 students. Featuring speakers from global and local enterprises, these talks offered insights into diverse career paths and industry trends, bridging academic learning with real-world applications.



In 2024, the Working Group partnered with the University of the Philippines Los Baños (UPLB) to conduct a webinar titled "Introduction to AOAC INTERNATIONAL: Setting Standards in Analytical Chemistry." The event included 15 panelists and nearly 600 participants, with about one-third being students. Notably, 4% of attendees were from countries outside the Philippines, including Austria, Germany, India, and the United States.

One attendee remarked, "The webinar humanized AOAC for me. I used to think of AOAC as a faceless body, but attending the webinar gave it a face. I appreciated that AOAC not only publishes standard methods but also creates opportunities for experts to share their knowledge and build a community that impacts the world."



In collaboration with the National University of Singapore (NUS), the Working Group has organized immersive **Student Lab Tours** to four local laboratories: Abbott Nutrition R&D, Eurofins Food Testing, CTC Analytics Asia, and Metabolomics@Duke-NUS. These tours not only provided students with firsthand exposure to cutting-edge technologies and industry practices but also offered invaluable networking opportunities with professionals in the field. By bridging the gap between academia and industry, AOAC SEA aims to inspire the next generation of analytical scientists and cultivate a pipeline of talent within the community.

Other AOAC SEA News



As of Oct 2024, AOAC SEA has effectively engaged 632 registered members (PH: 283, MY: 87, SG: 71, VN: 57, TH: 26, ID: 22, MM: 11, KH: 8, BN: 7, LA: 2; IN/US/EU/others: 58), 1190 newsletter subscribers (average open rate of the 5 latest newsletters: 62%), 1179 LinkedIn followers, and 670 Facebook followers.

To address community needs, AOAC SEA hosted a technical workshop on **microbiology** at the 2023 Annual Conference and organized multiple talks on this topic at the 2024 Annual Conference. We invite feedback on topics for the **Metrology Workshop** at the 2025 Annual Conference and suggestions for **online training**. Please reach out to us at info@aoac-sea.org.



We have partnered with several organizations, including Nanyang Polytechnic International (NYPi), the Malaysian Institute of Food Technology (MIFT), the Malaysian Palm Oil Board (MPOB), and universities for workshop and training activities. Upcoming collaborations include projects with the AOAC Arab Section, the Global Food Regulatory Science Society (GFoRSS), the Asia Pacific Metrology Programme (APMP), and more. To collaborate with us, please email info@aoac-sea.org.

AOAC SEA has had 8 Organizational Members, 27 Conference Sponsors (most of whom have sponsored all three annual conferences), and 9 program/workshop sponsors, with 14 new sponsors in 2024.



Organizational Members include Department of Scientific Services, Ministry of Health (Brunei; since 2023), Vinamilk (Vietnam; since 2023), SIG Laboratory (Indonesia), Quality Assurance and Testing Center 3 (Vietnam), Department of Science and Technology – Food and Nutrition Research Institute (Philippines), Department of Science and Technology – Industrial Technology Development Institute (Philippines), Philippine Institute of Pure and Applied Chemistry (Philippines), and Abbott Nutrition (Singapore; 2023).

As a dynamic organization with highly engaged activities, AOAC SEA has attracted numerous sponsors. The 2022 AOAC SEA 1st Annual Conference had the support of 13 sponsors, followed by 16 sponsors in 2023 and 17 sponsors in 2024. Notable sponsors that supported all three conferences include Merck, Waters, Agilent, Shimadzu, and Abbott. Gold Standard Diagnostics, Fujifilm, Nestlé, R-Biopharm, Romer Labs, Eurofins, Gerhardt, Bruker, and Sciex sponsored two events each, while Thermo Fisher, Matrix (Malaysia-based), Neogen, and Navi Technologies (Vietnam-based) sponsored once. New sponsors for the 2024 conference include McCormick, Nestlé NQAC and several Philippines-based companies/organizations such as RainPhil Inc., DOST-ITDI, DOST OneLab, Biokits Philippines Inc., Labtrader Inc., and Microgenetix Inc., along with Brownstone Asia-Tech Inc. The Student Awards Program has been sponsored by Abbott since 2022. The Student Lab Tours received support from Abbott and Eurofins. The MOSH/MOAH workshop was sponsored by LECO, Olam Food Ingredients (ofi), Axel Semrau, GERSTEL, BÜCHI and Agilent. Nestlé is a big supporter of the pesticide project.



TALKS WITH MOST IMPRESSIONS ON LINKEDIN

2,748 organic impression

2024 AOAC SEA 3rd Annual Conference



Ethylene Oxide Residue Analysis



Dr. Katerina Mastovska
Deputy Executive Director & Chief Science Officer, AOAC INTERNATIONAL

With representatives from:



including a Pesticide Workshop:



1,874 organic impression

2024 AOAC SEA 3rd Annual Conference



PFAS Analysis in Food and Food Contact Materials

Dr. Katerina Mastovska
Deputy Executive Director & Chief Science Officer, AOAC INTERNATIONAL

With representatives from:



including a Pesticide Workshop:



894 organic impression

2024 AOAC SEA 3rd Annual Conference



Limitations of current analytical reference methods to determine vitamins in foods; challenges to support regulatory compliance and nutritional composition data

Dr. Erik J.M. Konings
Consultant

With representatives from:



including a Pesticide Workshop:





Dr. Xinping Hou
President of AOAC SEA
Analytical Service Manager SEA, BV-AQ
Oct 16, 8:30-8:43

Dr. Xinping Hou is currently the analytical service manager at BV-AQ Singapore, where she provides technical consultation and develops analytical service strategies for the organization to support the industries on their innovation, process improvement and product quality control. Prior to BV-AQ, she had been working in other contract research and testing laboratories as technical manager and operation director for food and pharmaceutical product analysis.

She has been a member of AOAC International since 2016. She has participated AOAC SPIFAN program and led the setup of many AOAC methods in the laboratory. Dr. Hou has been appointed by Singapore Accreditation Council (SAC) as the technical auditor for food and pharmaceutical laboratory accreditation since 2003.

She has a bachelor and master's degree in analytical chemistry and got her PhD in Chemistry from National University of Singapore. She is (co)author of more than 10 scientific publications.



Dr. Annabelle Briones
Director, Department of Science and
Technology - Industrial Technology
Development Institute (DOST-ITDI), Philippines
Oct 16, 8:43-8:56

Dr. Annabelle V. Briones is the Director of the Industrial Technology Development Institute (ITDI) at the Department of Science and Technology (DOST). She leads efforts to enhance the global competitiveness of local industries through research, development, and the commercialization of innovative technologies. Dr. Briones holds a doctorate in Engineering from Keio University, Japan, and a Master of Science in Chemistry from the University of Santo Tomas, Philippines. In 2017, she was recognized as Scientist I by the Philippine National Academy of Science and Technology and achieved rank IV as a Career Executive Service Officer.

Dr. Briones has represented the Philippines at various international conferences, authored numerous publications and patents, and was a finalist for the 2016 R&D 100 Awards for her Philippine Mosquito Ovicidal/Larvicidal Trap system. Her accolades include the Woman Leader of DOST award in 2019, the Presidential Lingkod Bayan Award (group category) in 2014, and the Gregorio Zara Award for Applied Research from PHILAAST in 2020. In 2021, she was recognized by Asian Scientist Magazine as one of the region's outstanding scientists.



Mr. Noel A. Padre
Assistant Secretary for Planning and Project
Development, Department of Agriculture,
Philippines
Oct 16, 8:56-9:10

Mr. Noel A. Padre has served as the Assistant Secretary for Planning and Project Development since February 2024. Previously, he held the role of Assistant Secretary for Policy Research and Development from March 2023 to February 2024, and before that, he was the Assistant Secretary-Designate for Policy, Research, and Development from 2015 to March 2023.

From 2015 to 2023, he was the Acting Director IV of the Policy Research Service at the Department of Agriculture in Quezon City. In these roles, he has demonstrated the capacity to formulate, review, and analyze policies that support the Department's mission of fostering a competitive agriculture sector, which is essential for improving quality of life and promoting food security.

A graduate of the University of the Philippines, Los Baños, Mr. Padre worked at the U.P. Los Baños Foundation (detailed to the Department of Agriculture's Office of the Secretary) before officially joining the Department of Agriculture in the 1990s.



Dr. Renato U. Solidum Jr.
Secretary, Department of Science and
Technology (DOST), Philippines
Oct 16, 9:10-9:40

Dr. Renato U. Solidum, Jr. is the Secretary of the Department of Science and Technology (DOST) of the Philippines. He has worked with DOST for the past 40 years and rose from the ranks. He started his professional career at the DOST - Philippine Institute of Volcanology and Seismology (PHIVOLCS) in 1984 after graduating with a BS in Geology degree from the University of the Philippines (UP) Diliman in the same year. He served at PHIVOLCS in varying capacities, starting as Science Research Specialist I and became its Director in 2003.

Dr. Renato U. Solidum, Jr. pursued his graduate studies at the University of Illinois at Chicago, USA, earning a MS degree in Geological Sciences at the University of Illinois, Chicago, USA and the Scripps Institution of Oceanography, University of California San Diego (UCSD), obtaining a PhD degree in Earth Sciences.



Dr. Katerina (Kate) Mastovska

Deputy Executive Director and Chief Science Officer of AOAC INTERNATIONAL, USA

Oct 16, 9:40-10:10

Oct 16, 11:05-11:30

Oct 16, 16:40-17:05

Dr. Katerina (Kate) Mastovska is Deputy Executive Director and Chief Science Officer at AOAC INTERNATIONAL, where she is responsible for leadership of all science programs and projects. She joined the AOAC staff in January 2023 but has been a very active member of AOAC INTERNATIONAL since 2004, serving in the past as a chair of several expert review panels and working groups, co-chair of the AOAC Chemical Residue and Contaminant Community, or member of the Official Methods Board. Dr. Mastovska is a Fellow of AOAC INTERNATIONAL and received the Association's highest scientific honor, the Harvey W. Wiley Award, in 2021. Prior to joining AOAC, she worked at Eurofins Scientific and has most recently served as Chief Scientific Officer at Eurofins US Food Division. Dr. Mastovska has been actively involved in the analysis of chemical residues, contaminants and adulterants in food for more than 25 years and has more than 70 publications in that area.



Dr. Zhang Wenlin

Team Leader, Applications and F&E Market Development, Waters Corporation

Oct 16, 10:40-11:05

Wenlin has over 10 years' experience in Analytical Instrument business. In her current role, Wenlin helps food and environmental organizations understand current F&E regulations, trends, and introduce Waters latest F&E solutions. She held various technical roles as LC-MS Applications Specialist and Sales Applications Team Leader prior to joining the Marketing team. She earns Ph.D in Chemistry from National University of Singapore.



Dr. Deni Taleski

Technical Development Officer, National Measurement Institute, Australia

Oct 16, 11:30-11:55

Dr. Deni Taleski completed his BSc. Adv (Hon) in Chemistry and Pharmacology at the University of Sydney where he went to complete his PhD in Synthetic Organic Chemistry (2013). He has 8 years' experience at the National Measurement Institute Australia (NMI-A) as a chemical analyst for the Australian Sports Drug Testing Laboratory (ASDTL) and as Technical Development Coordinator for Analytical Services Branch where he assists in strategic implementation and validation of analytical methods



Mr. Yan Zhi Tan

Application Specialist, Gold Standard Diagnostics

Oct 16, 11:55-12:20

Tan Yan Zhi is an Application Specialist at Gold Standard Diagnostics, focusing on industrial solutions in the Asia region.

With a robust background in product application development, he provides technical support for automation platforms. Tan also excels in creating evaluation protocols and conducting performance studies for PCR, ELISA, and LFD test kits, effectively demonstrating their capabilities to customers.

He also leads training sessions for customers and sales teams, organizing technical workshops and webinars across the region. Additionally, Tan collaborates on developing new matrices and validating innovative test kit protocols



Mr. Andrew Lienau

Food Regulatory and Validation Senior Expert, MilliporeSigma, USA

Oct 16, 14:10-14:35

Andrew Lienau is the Food Regulatory and Validation Senior Expert at MilliporeSigma, site location in Bellevue, Washington (USA) for Merck KGaA. Andrew has over 30 years' work experience in the fields of Microbiology, assay development and certification processes for pathogen detection in food. He is a member of the Expert Review Panel for AOAC OMA, Technical Board for MicroVal, and several working groups for ISO.



Mr. Marlon S.A. Aguinaldo

Supervising Science Research Specialist & Head of the Biological Laboratory, Standards and Testing Division, DOST-ITDI

Oct 16, 14:35-15:00

Mr. **MARLON SA. AGUINALDO** is Registered Medical Technologist by profession. He has earned his Bachelor's degree at the Centro Escolar University – Manila. He is a Supervising Science Research Specialist, and Head of the Biological Laboratory, Standards and Testing Division of the Department of Science and Technology (DOST) – Industrial Technology Development Institute (ITDI).

As part of a government laboratory, Mr. Aguinaldo is involved in the food safety system through microbiological analysis of food, laboratory quality management system, and research and development activities. Under the National Metrology Laboratory Philippines (NML, Phil), his team has conducted research studies on biological metrology, developed proficiency testing materials for food microbiological measurements, and organized interlaboratory comparison schemes for local laboratories.



Dr. Benny Tong Meng Kiat

Senior Analytical Scientist, Chemical Metrology Laboratory, Chemical Metrology Division, Applied Sciences Group, Health Sciences Authority, Singapore

Oct 16, 15:00-15:25

Dr. Tong received his PhD degree from the Nanyang Technological University in 2014. He is currently a Senior Scientist in Health Sciences Authority, Singapore. He first joined the Inorganic Chemistry Section in 2015 and later joined the Organic Chemistry Section in 2019. Dr. Tong has been involved in various method development of in-house methods used for organising and participating in international and regional comparative studies participated by the laboratory. These methods were also used to provide proficiency testing materials for the testing laboratories. Dr. Tong is also a trainer for basic statistics, statistics for proficiency testing programmes, method validation and measurement uncertainty courses organised by the laboratory. Over the years, he has provided training to over 450 participants from government and commercial laboratories, both locally and regionally. Dr Tong also serves as Technical Assessor for Singapore Accreditation Council's Laboratory Accreditation Scheme for laboratories accredited in accordance with ISO/IEC 17025 since 2020.



Mr. Guan Huah Yeoh

External Lead Assessor and Technical Assessor of SAC-SINGLAS; Senior Partner, GLP Consulting, Singapore

Oct 16, 15:25-15:50

Mr Yeoh Guan Huah is the senior partner of GLP Consulting, a laboratory quality management consultancy and training firm incorporated in Singapore since 1998. He was the General Manager of ALS Group of Laboratories (Life Sciences Division) in Singapore, Malaysia, Hong Kong and China since 1993 and retired from the posts in November 2016. He is currently an appointed External Lead Assessor and Technical Assessor of SAC-SINGLAS in the Chemical & Biological and Environmental fields for the ISO/IEC 17025 accreditation standards till 31 March 2025. He represented DSM/SIRIM (Department of Standards Malaysia / Standards of Industrial Research Institute of Malaysia) in the ISO Technical Committee TC69 in 2005-2016, involved in developing international standards for statistical applications and was appointed as the TC Convenor for ad hoc Group AHG 1 in 2007-2016. Mr Yeoh was a member of the working group in developing the ISO 21748 standard method for evaluating measurement uncertainty. Recently he was appointed as one of the technical experts of the National Metrology Institute of Germany, namely Physikalisch-Technische Bundesanstalt for its "ASEAN-Germany Strengthening the Quality Infrastructure in ASEAN" project by conducting a 2-day training on measurement uncertainty to technical assessors from ASEAN in Phnom Penh of Cambodia on 14-15 March 2024.



Dr. Huei Hong Lee

Co-chair of Emerging Issues Working Group, AOAC SEA

Oct 16, 17:30-17:55

Dr. Lee earned her PhD in Food Chemistry from Universiti Putra Malaysia. She is principal application chemist from Waters Pacific Pte Ltd and has about 10 years' working experience in advanced analytical instrumentation. In her current role, she developed analytical solutions for emerging applications in the areas of food, environmental and material science. She is knowledgeable in agri-food applications from field to laboratory and has authored 20 scientific publications in the area of food safety and nutrition. She joined AOAC International in 2019 and actively contributed to the AOAC southeast Asia section as co-chair for Emerging Issues working group. She is also a member of the regional professional network of food science and technologist (SIFST / MIFT) and trained professional in method validation, verification and measurement of uncertainty for ISO/IEC 17025 accreditation.



Ms. Alleni T. Junsay
Supervising Science Research Specialist,
National Metrology Laboratory, DOST-ITDI
Oct 16, 17:55-18:20

Ms. Alleni T. Junsay is the Section Head of the Metrology in Chemistry Section at the DOST-ITDI National Metrology Division. She holds a master's degree in Chemistry from the University of Santo Tomas. In her role, she leads the production of reference materials and the implementation of proficiency testing schemes for chemical measurements, ensuring the accuracy and reliability of scientific processes. The reference materials (RMs) and proficiency tests (PTs) her team has developed focus on additives, contaminants, pesticides, veterinary drug residues, and elements in food and water. Ms. Junsay pioneered the purity assessment of organic pure compounds in the Philippines and is currently spearheading a new project aimed at establishing conductivity standards in the country. *AFFILIATIONS: APMP Technical Committee for Amount of Substance; APMP Food Safety Focus Group; APMP Clean Water Focus Group; APMP Proficiency Testing Working Group; International Measurement Confederation (IMEKO) Technical Committee (TC24).*



Dr. Hayati Samsudin
Assistant Professor, Food Technology
Division, School of Industrial Technology,
Universiti Sains Malaysia
Oct 17, 8:30-8:55

Hayati Samsudin is an Assistant Professor at the Food Technology Division, School of Industrial Technology, Universiti Sains Malaysia. She earned her M.S. and Ph.D. in Packaging from Michigan State University's School of Packaging. She has been actively involved in consulting, research, contract testing, training, and teaching related to food and packaging interactions, packaged food performance, and shelf life, both locally and internationally. Her research group primarily focuses on the development and modification of additives for packaging applications, food packaging for preservation and safety, and regulatory compliance. She received the 2022/2023 Fulbright Malaysian Scholar Award for her sabbatical training program in thermally processed and packaged food products at Purdue University's Food Entrepreneurship and Manufacturing Institute, as well as its Food Science Department. She is certified in thermal processing systems, acidification, and container closure evaluation programs for low-acid and acidified foods in closed containers. She currently serves as a technical expert on several national committees in Malaysia, focusing on food processing, packaging compliance, and nanotechnology standards.



Dr. Erik Konings
Consultant
the Netherlands
Oct 17, 8:55-9:20
Oct 17, 11:00-11:10

Erik Konings recently retired as R&D Expert from the Nestlé Institute of Food Safety and Analytical Sciences in Lausanne, Switzerland, where he provided leadership to global quality, laboratory and regulatory teams to engage in strategic local activities to drive alignment/harmonization of analytical methods and partnered with government and non-government organizations in the development of standards for analytical methods.

Erik graduated in 1984, with majors in Analytical and Clinical chemistry and started his professional career at the then called Food Inspection Service in Maastricht, the Netherlands. He holds an MSc degree in Epidemiology and a PhD in Health Sciences of Maastricht University, the Netherlands (2001). In 2008 he started at the European Food Safety Authority (EFSA) in Parma, Italy, for a secondment as Scientific Officer at the Data Collection and Exposure Unit, and from there accepted, in 2009, a position at the Nestlé Research Centre in Lausanne, Switzerland.

Erik has been active in several standard developing organizations including AOAC INTERNATIONAL (Past-President), the International Organization for Standardization (ISO) (Chair ISO TC 34, Working Group 14 on Vitamins, carotenoids and other nutrients), the European Committee for Standardization (CEN) (Chair CEN TC 275 Working group 9 on Vitamins and carotenoids), and the International Dairy Federation (IDF). He participates in the Codex Committee on Methods of Analysis and Sampling (CCMAS) as member of the Inter-Agency Meeting. Erik is (co)author of more than 45 scientific publications.



Ms. YiFan Jiang

Co-chair of Working Group on Pesticide Residues Analysis in Culinary Herbs and Spices, AOAC SEA

Oct 17, 9:20-9:45

Oct 17, 15:10-15:25

YiFan Jiang has nearly 15 years of experience in the area of science and regulatory affairs. She joined global food ingredient company ofi as Regional Regulatory Compliance Lead for APAC in 2022.

Prior to that, YiFan worked as the Head of Science and Regulatory Affairs in regional food industry association FIA, as well as Regulatory Affairs Advisor in international consultancy firm EAS Strategies, where she was playing an active role in working with the industry and government stakeholders to develop science-based regulations and build multi-sectoral partnership in the region.

YiFan graduated with a Degree in Applied Science majoring in Food Science and Technology at the National University of Singapore in 2012, and have worked with companies such as McCormick and Abbott Nutrition in technical functions including Quality Assurance and Product Development.



Ms. Erin Crowley

Chief Scientific Officer
Q Laboratories, USA

Oct 17, 9:45-10:10

Erin Crowley is the Chief Scientific Officer at Q Laboratories, Inc in Cincinnati, Ohio. Erin and her R&D team have served as an independent third-party laboratory with a primary focus on providing high quality method validation for microbiological rapid detection methods. These validations include Expert Laboratory AOAC Official Methods of Analysis, AOAC Research Institute Performance Tested Methods Program, MicroVal and AFNOR NF Certification Programs. Erin frequently presents technical symposia globally on Method Validation, Method Verification, Harmonization and ISO standards development often representing the perspective of the third-party laboratory. In addition to being an active member of the International Association of Food Protection (IAFP) and AOAC, Erin serves as Past-President of the AOAC International Board of Directors, Past-Chair of the AOAC Official Methods Board, a member of the MicroVal Technical Committee (MVTc), ISO TC34/SC9/WG 3 Committee on Method Validation and Chair of the JIFSAN Advisory Council. Erin earned a B.S. from the University of Cincinnati and an M.A. from Tufts University.



Ms. Ma. Rachel V. Parcon

Chief Science Research Specialist, Standards and Testing Division, DOST-ITDI

Oct 17, 10:10-10:35

Ms. MA. RACHEL V. PARCON is a licensed chemist. She earned her Master of Science in Chemistry degree at the University of Sto. Tomas, Manila and is currently taking her Doctorate degree in Management Science at the Technological University of the Philippines, Manila.

Ms. Parcon has been connected with the Department of Science and Technology since 2010. Currently, she is the Chief Science Research Specialist of the Standards and Testing Division, of the DOST Industrial Technology Development Institute.

She has been working in an analytical laboratory doing research and development on cosmetics, and analytical testing on food quality and safety. Currently, she is working on an R&D Project on the Standardization and Validation of Chemical Test Methods on Food Safety Parameters among DOST Laboratories.

Her ongoing project will be instrumental in capacitating the Philippine testing laboratories in the region. This initiative of the DOST-ITDI will make food safety testing available to serve various industries all over the country. She will be sharing the results of their study titled, "Development and Validation of Test Method on Parabens in Sauces".



Dr. Dean Powell

Senior Scitech Analyst, The Good Food Institute Asia Pacific

Oct 17, 11:35-12:00

Dean has provided scientific and technical expertise for GFI APAC since 2020, focusing on cultivated meat. He holds a Ph.D. in molecular and cellular biology with a focus on poultry muscle development and a bachelor's in Animal and Veterinary Bioscience, both from the University of Sydney.

Dean has experience working for the Australian Federal Government both as a scientific assessor for food safety regulations and as an international policy analyst focusing on the Asia Pacific region.



Thanh Nguyen-Tuan

Vietnam Center for Food Safety Risk Assessment (VFSA), National Institute for Food Control (NIFC), Ministry of Health, Vietnam
Oct 17, 12:00-12:25

Thanh Nguyen-Tuan is a young scientist who enjoys working with various microorganisms. He has been a researcher at the National Institute for Food Control (NIFC) for three years. Thanh is constantly eager to apply his expertise in the chosen field which he refers as "the study of small life". His research covers pathogens that threaten both the safety and quality of food, their association with foods as well as how they affect human health. By the end of 2024, Thanh will become one of the first officials of the Vietnam Center for Food Safety Risk Assessment (VFSA), the first food safety risk assessment agency of the Ministry of Health. Meanwhile, Thanh will also complete his work toward a master of science degree in this field.



Dr. Toru Miura

Manager (Head of Reference Material Group), FUJIFILM Wako Pure Chemical Corporation
Oct 17, 12:25-12:40

Dr. Toru Miura is a principal scientist and the lead of Reference Material Group within FUJIFILM Wako Pure Chemical Corporation. He has been with FUJIFILM Wako since 2011. Prior to joining FUJIFILM Wako, he worked as a research chemist in the National Metrology Institute of Japan (NMIJ), focusing on development of Certified Reference Materials using quantitative NMR (qNMR). Currently, he is a working group member of the Japanese Pharmacopeia herbal medicine and chemical pharmaceutical related to qNMR, a committee member of the Japanese Industrial Standard (JIS)K 0138 and Japanese Agricultural Standard (JAS) related to qNMR, and an invited expert of ISO/TC34 (Food products) and ISO/TC334 (Reference Materials). Since 2020, he serves as a member of the United States Pharmacopeia Expert Panel for qNMR to revise USP NMR General Chapters <761> and <1761>.



Dr. Sasi Rajendran

Asia Regional Manager, Minor Use Foundation
Oct 17, 14:15-14:25

Dr. Sasireka Rajendran has a PhD in Processing and Food Engineering from Tamil Nadu Agricultural University, India. Having worked extensively on multi-country projects across Asia, Sasi possesses a deep understanding of diverse cultures and developed an ability to navigate complex international landscapes. Her contributions to project management and networking at the Minor Use Foundation are evident through her communication and coordination skills, allowing her to effectively liaise with stakeholders across different countries in Asia. She works closely with the technical team of MUF to monitor and implement activities on MRL data generation. She works with Asian countries to identify the gaps in the crop protection tools for minor use crops and scoping new projects for the region. Throughout her career, Sasireka has showcased commitment to the agricultural community, contributing to professional societies such as Phi Tau Sigma – The Honor Society for Food Science and Technology and the American Society of Agricultural and Biological Engineers



Ms. Kriz Minguez

Chemist IV, Assistant Division Chief
Fertilizer and Pesticide Authority,
Philippines
Oct 17, 14:25-14:40

Ms. Kriz Minguez is a Chemist IV and the Assistant Division Chief at the Fertilizer and Pesticide Authority (FPA) in the Philippines. She joined the FPA in 2017, having previously worked at the Philippine Institute of Pure and Applied Chemistry. Ms. Minguez is a graduate of the University of the Philippines Los Baños (UPLB) and is a member of both the Integrated Chemists of the Philippines and the UPLB Chemical Society.



Ms. Veronica Picado

Director - Technical Operations, Minor Use Foundation

Oct 17, 14:40-14:55

Prior to joining the Minor Use Foundation, Veronica Picado led the Laboratory for Analysis of Agrochemical Residues in Costa Rica's Office of Sanitary and Phytosanitary matters and oversaw the process of establishing its international accreditation (ISO 17025). She has also served as the Costa Rican delegate to the Codex Committee on Pesticide Residues, the body responsible for setting international pesticide residue standards under the joint auspices of the WHO and the FAO. A chemist by training, she has extensive experience managing studies related to the magnitude of pesticide residues. She now serves as the Foundation's Study Director for Central America and the Caribbean, as well as the Manager for Technical Operations.



Dr. Kaushik Banerji

Director, ICAR-National Research Centre for Grapes, India

Oct 17, 15:25-15:40

Dr Kaushik Banerjee is the Director of ICAR-National Research Centre for Grapes, Pune. His area of research focuses on the development of efficient analytical methods for the sensitive and confirmatory estimation of pesticide residues and mycotoxins in agricultural and food matrices, and risk assessment studies for fixation of crop-specific MRLs. Being the Chairman of the Scientific Panel of FSSAI on methods of sampling and analysis, he regularly contributes to the development and implementation of the food safety standards in India. Dr Banerjee's extensive contributions to science and community have earned him numerous national and international laurels, and fellowships of Royal Society of Chemistry, National Academy of Agricultural Sciences, ICAR, and W.B. Academy of Science & Technology.



Mr. Mark Kenneth C. Gonzales

Chemist III, Plant Product Safety Services Division, Bureau of Plant Industry, Department of Agriculture, Philippines

Oct 17, 14:55-15:10

Mr. Mark Kenneth C. Gonzales earned his bachelor degree in Chemistry at the University of Santo Tomas (UST), Philippines. He is currently Chemist III at the Plant Product Safety Services Division, Bureau of Plant Industry, under the Department of Agriculture. The Plant Product Safety Services Division (PPSSD) under the BPI is tasked to undertake responsibilities relevant to food safety of fresh and minimally processed plant foods from primary production to post-harvest stages of the food supply chain. Its main functions include: enforcement food safety controls in plant foods through PhilGAP Certification, registration and licensing of Food Business Operators; intensification of the monitoring system for contaminants and pesticide residues to ensure the supply of safe food for the consumers.



2024 Student Awardee
Ms. Kirthana Kathirawan
Graduate Student
Universiti Malaya, Malaysia
Oct 17, 14:25-14:40



3D-Integrated Membrane Protected Micro-Solid-Phase Extraction of Sulfonamides in Food Samples: An Innovative Approach

Discover a new method to detect harmful sulfonamides (SAs) in food and water! This innovative 3D-integrated membrane-protected micro solid-phase extraction (3D-MP- μ -SPE) technique is eco-friendly, cost-effective, and highly sensitive. Using a 3D-printed filter holder, it efficiently extracts SAs from water, milk, and fish samples prior to HPLC-UV analysis. This method offers a sustainable and efficient solution for SAs determination, with robust performance and minimal environmental impact.



2024 Student Awardee
Ms. Kristelle Mae Tardecilla
Graduate Student
University of Santo Tomas, Philippines
Oct 17, 14:40-14:55



Evaluation Of Inhibitory, Immunomodulatory, Survival, and Growth Effects of Host-Derived *Weissella Confusa* on *Macrobrachium Rosenbergii* Challenged with *Vibrio Parahaemolyticus*

Explore a sustainable solution for prawn farming! This study highlights the use of *Weissella confusa*, a beneficial microorganism from the gut of *Macrobrachium rosenbergii*, to manage bacterial diseases caused by *Vibrio parahaemolyticus*. Unlike antibiotics, which contribute to antimicrobial resistance, this eco-friendly probiotic enhances prawn immunity and overall health. The research shows that supplementing prawn diets with *W. confusa* significantly inhibits the growth of harmful bacteria, boosts immune responses, and improves survival rates, weight gain, and feed conversion ratios.



2024 Student Awardee
Mr. Muhammad Raznisyafiq bin Razak
Graduate Student
Universiti Putra Malaysia
Oct 17, 14:55-15:10



2024 Student Awardee
Ms. Norfarizah Hanim Hassan
Graduate Student
Universiti Sains Malaysia
Oct 17, 15:10-15:25



Acute Toxicity and Risk Assessment of Endocrine Disrupting Compounds (EDCs) in Tropical Freshwater Cladocerans *Moina micrura*

Explore the impact of endocrine disrupting compounds (EDCs) on human health and the environment! This study evaluates the acute toxicity of nine EDCs, including Bisphenol A (BPA) and Perfluorooctane sulfonic acid (PFOS), using native tropical freshwater cladocerans as bioindicators. The research assesses adverse effects at molecular, organ, individual, and population levels, revealing significant upregulation of stress-related genes and reductions in heart rate and individual size at high concentrations. It provides comprehensive and accurate method that examines early-stage diagnosis, and biological impacts of chemicals in several biological organizations.

Authenticity and Quality Assessment of Malaysian Stingless Bee Honey: Paving the Path towards the Next Superfood

Discover the authenticity of stingless bee honey (SBH), a superfood known for its unique composition and therapeutic properties! This study delves into the chemical profiles, physicochemical properties, antioxidant activities, and thermal properties of SBH to establish quality standards and ensure its authenticity. Using advanced techniques like HPLC and micellar electrokinetic chromatography, researchers identified key phenolic compounds and furanic content. Additionally, machine learning was employed to detect sugar adulteration with high accuracy.



2024 Student Awardee
Mr. Ramon Arvin Noriel Santos
Graduate Student
University of Santo Tomas, Philippines
Oct 17, 15:25-15:40



2024 Student Awardee
Mr. Sotheaboreach Ham
Undergraduate Student
Royal University of Agriculture, Cambodia
(Unable to attend)



Formulation of a Phage Cocktail for Biocontrol Applications against *Listeria monocytogenes* and *Salmonella enterica* ser. Typhimurium in Raw Meat Samples

Discover a potential solution to combat foodborne pathogens! This study explores the use of lytic bacteriophages as biocontrol agents against *Listeria monocytogenes* and *Salmonella Typhimurium*, major pathogens causing foodborne diseases. Researchers isolated and characterized phages from sewage samples, developing effective phage cocktails for both bacteria. These cocktails, applied to raw beef and pork, significantly reduced bacterial loads, especially at 4°C. The Lv-cocktail and Sv-cocktail showed impressive biocontrol activity, with the latter completely clearing *Salmonella* from beef samples.

Assessment of Antibiotic Resistance on *Vibrio* spp. and *Aeromonas* spp. Isolated from Red Tilapia Fish in Siem Reap Province, Cambodia

Dive into the potential issue of antibiotic resistance in Cambodian aquaculture. This study investigates antibiotic-resistant bacteria, such as *Vibrio* spp. and *Aeromonas* spp., in red tilapia farms across Siem Reap Province. Researchers collected samples from five farms and identified high levels of resistance to multiple antibiotics, posing significant risks to food safety and human health. This study provides an implication toward the urgent management and control the spread of Antimicrobial resistance (AMR) in aquaculture practice.

Ethylene Oxide Residue Analysis

Katerina Mastovska
AOAC INTERNATIONAL

Ethylene oxide is a highly reactive gas used in some countries as a fumigant to inhibit microbial growth in certain dry foods, such as spices, dried herbs, oilseeds, nuts, or dried fruits and vegetables. It has not been approved for this use in the European Union (EU) since 1991. Interest in ethylene oxide has grown significantly since the fall of 2020 when ethylene oxide residues above the EU maximum residue level (MRL) were first reported in sesame seeds imported to EU countries from India. Since then, additional food ingredients and products have become subjects of scrutiny and increased testing, including various spices, botanicals, or thickening agents (especially locust and guar gums) and related products.

The analysis of ethylene oxide and its marker residue 2-chloroethanol poses various challenges due to the analyte properties, leading to concerns about results generated by different labs using different methods. Therefore, AOAC INTERNATIONAL was approached by stakeholders about the need to develop a standardized method for the analysis of ethylene oxide residues. In the first step, AOAC INTERNATIONAL developed Standard Method Performance Requirements (SMPRs) for the determination of ethylene oxide and its marker residue 2-chloroethanol in oilseeds and nuts, grains, pulses, dried herbs, spices and extracts thereof, food additives, dietary supplement products and ingredients, dried fruits, essential oils, coffee, cocoa, and composite foods (AOAC SMPR 2024.005).

This SMPR describes recommended minimum method performance characteristics and requirements for parameters, including limit of quantification, recovery, repeatability, and reproducibility. It lists target matrix categories with representative matrices that should be included in the method validation and provides other method validation guidance, such as how to fortify samples with ethylene oxide or how to evaluate method selectivity. AOAC SMPR 2024.005 is used as a basis for a call for methods, which was recently issued to solicit submissions of suitable candidate methods for AOAC Official First Action status consideration.

Measurement of cyanide and cyanoglycoside content in cassava

Deni Taleski
National Measurement Institute, Australia

Cyanide content in food and feed is regulated internationally for safety and trade. Historical methods for the detection of cyanide included hydrocyanic measurements as well as matrix specific procedures for isolating cyanide bound as cyanoglycoside equivalents. This talk examines the regulation, history, and variety of methods, as well as recent experiences in developing a robust method for cyanide measurement in cassava ready-to-eat (RTE) chips.

Bigger is Better: Updated ISO Regulations for Testing Large Sample Sizes by Assurance® GDS

Andrew Lienau
MilliporeSigma, USA

Larger or composite samples are used in microbiology to reduce the cost and time of processing samples while still providing useful information. A composite sample is created by combining a representative amount from each of multiple samples into one. ISO has recently published amendments for two standards concerning analysis of larger sample sizes. First standard is ISO 6887, part 1 of series. This amendment aims to improve the accuracy of microbiological testing in food safety and quality control. Updated protocols issued to ensure that microbiological examinations are more robust and reliable using larger sample sizes. Next standard is ISO 16140, part 4 of series, for individual labs. This amendment aims to support laboratories in achieving consistent and reliable results when validating testing methods. Emphasis on upon maintaining rigorous validation processes with larger samples to ensure methods are suitable for their intended purpose. This presentation provides a practical overview of these two amendments and how to apply in the user's laboratory. An example using the Assurance® GDS system will be provided.

Determining Laboratory Competence by Proficiency Testing for Food Microbiological Analysis

MARLON SA. AGUINALDO , AGNES P. DE ASIS , NINA MAE L. DELA CRUZ and SEAN M. ESTRADA

Industrial Technology Development Institute, Department of Science and Technology, Bicutan, Taguig City, Philippines 1630

The National Metrology Laboratory, Philippines (NML, Phil), developed two (2) proficiency test (PT) items and organized the PT scheme, ICSM – 2021 - 01. Participation to PT schemes is an external tool used by laboratories to prove their competence. The PT items - *Salmonella* sp. Detection and Aerobic Plate Count (APC) in freeze – dried milkfish were developed by preserving *Salmonella enterica* cells through immobilization, and the milkfish powder by freeze - drying. Both components were ground and sieved to produce a free – flowing powder. For the PT item, *Salmonella* sp. Detection, immobilized *Proteus mirabilis* cells, were used as background flora. Based on microbial cell concentration, the PT items were characterized for homogeneity and stability using ISO Guide 35: 2017. The PT items met the requirements for homogeneity based on Cochran's test for outliers and one - way ANOVA. For *Salmonella* sp. Detection, the *S. enterica* cell concentration was stable up to 70 days at 4 – 8 0C and up to 21 days for *P. mirabilis*, using linear regression analysis. For APC in milkfish, the PT item was stable for 90 days.

For *Salmonella* sp. Detection, the participants received two sets of samples. Sample A consisted both *S. enterica* and *P. mirabilis* cells. While sample B consisted of *P. mirabilis* only. Performance evaluation was based on determining the presence or absence of *Salmonella*. For sample A, 26 out of the 28 participants correctly determined the presence of *Salmonella* sp., and 23 participants correctly determined its absence for sample B. For APC in milkfish, the performance evaluation was based on computed z – scores derived from the consensus value of the interlaboratory comparison following ISO 13528:2015. Out of the 28 participating laboratories, 25 obtained satisfactory rating, while 3 participants obtained unsatisfactory rating.

By developing PT items, the NML, Phil was able to provide local laboratories access to a PT scheme, and assess their competence. The performance evaluation could be used by laboratories for their accreditation to ISO/IEC 17025:2017, or implement corrective actions. The study could be used as a foundation for the development of other PT items and to make PT schemes accessible for local laboratories.

HSA's Work on Insect-based Certified Reference Materials – Supporting Food Safety and Security

Benny Tong Meng Kiat
Health Sciences Authority, Singapore

The world's population is expected to exponentially reach 9.7 billion people by 2050. Coupled with decreasing arable land and resources, ever deteriorating climate changes and unsustainable practices, it is imperative that alternative food options are being explored and evaluated.

In this respect, insects present as an attractive alternative protein source as compared to conventional meat sources and crops. They have high nutritional values and high quality protein content in terms of essential amino acid profile. They are also rich in diversity and have smaller ecological footprint.

While entomophagy, the practice of eating insects is widely practiced in some Asian cultures, it remains largely unpalatable in the West. One of the key drivers to wider acceptance is improving public trust. This can be achieved through rigorous regulations supported by comprehensive food safety testing regimes.

The Health Sciences Authority (HSA) has been producing certified reference materials (CRMs) in accordance with ISO 17034 since 2011. We have recently launched a CRM based on crickets and is certified for elements such as arsenic, cadmium, chromium, lead, mercury and selenium. In addressing chemical containments, another CRM based on black soldier fly is currently in production and is being certified for polycyclic aromatic hydrocarbons (PAHs), mycotoxins and veterinary drugs. These CRMs will be useful for testing laboratories to validate their analytical methods, as well as serve as quality control materials, which ultimately supports the alternative protein industry and instill public confidence on insects for food or feed.

The presentation will focus on the production of these metrologically traceable CRMs. Their property values, which are determined using higher-order techniques such as isotope dilution mass spectrometry (IDMS) or standard addition methods using ICP-MS, ICP-HRMS, LC-MS or GC-MS will be shared. Further, the presentation will describe how the measurement uncertainties of the property values were rigorously evaluated following ISO/IEC Guide 98-3.

The Concepts and Applications of Detection Limit in Chemical Residual Analysis

GuanHua Yeoh

GLP Consulting, Singapore

In the validation protocols for the analytical properties of an analytical method, LOD (Limit of Detection) and LOQ (Limit of Quantitation) are one of the important parameters to be studied in trace or residual food analysis for toxic materials. Through these limits, it is possible to define the smallest concentration of undesirable analyte that can be reliably detected if actually present in a given sample and quantified it with, say 95% confidence. However, the subject of detection limit is quite controversial, subject to different approaches in its estimation.

In this presentation, the basic concepts and approaches in establishing the analytical detection limits through some statistical considerations will be discussed. Relationships between limits of decision, detection and quantification in the experimental concentration domain will be explained. Worked examples with experimental data will be given to illustrate these estimations.

MOSH/MOAH Analysis in Foods: A Review on Regulations, Testing Methods, and Food Supply Chain Mitigation

Huei Hong Lee, Jie Zhang

Emerging Issues Working Group, AOAC SEA

Mineral oil saturated hydrocarbons (MOSH) and mineral oil aromatic hydrocarbons (MOAH) are aliphatic and aromatic hydrocarbons that can be carcinogenic and are of concern for food safety. The Emerging Issues Working Group of AOAC Southeast Asia section has brought together different stakeholders to review the latest status of MOSH/MOAH analysis in foods from different perspectives. It is shown from the published reports from European Food Safety Authority (EFSA) on the potential health hazard from MOAH with 3 or more rings and bioaccumulation evidence of MOSH. The concerning health hazard has prompted the drafting of EU-wide harmonised approach for handling findings of aromatic mineral oil hydrocarbons (MOAH) in foods with acceptable limits ranged from 0.5 to 2 mg/kg for food with different fat content. The formulation of mitigation strategies can be complex involving process control and also packaging materials used to contain raw materials or foods. Robust and reliable testing of raw materials, intermediate to final products are crucial to efficiently mitigate the health hazard from mineral oil from reaching the consumers. Different sample preparation and testing approaches routine testing using LC-GC-FID and GCxGC ToF were also discussed. This presentation summarised the need for combined efforts in regulation, reliable testing methods, and supply chain mitigation to effectively address MOH contaminants in foods.

PFAS Analysis in Food and Food Contact Materials

Katerina Mastovska

AOAC INTERNATIONAL

Per- and polyfluoroalkyl substances (PFAS) are synthetic compounds widely used in various industrial applications, including food packaging and food contact materials (FCMs), due to their resistance to heat, water, and oil. However, their persistence in the environment and potential health risks have raised significant concerns. PFAS can migrate from FCMs into food, leading to direct human exposure. Reliable and fit-for-purpose analytical methods for detecting, identifying, and quantifying PFAS in food and FCMs are crucial for assessing exposure, potential sources of contamination, and regulatory compliance.

AOAC INTERNATIONAL has established a comprehensive PFAS initiative aimed at addressing these method needs and related analytical challenges. The first accomplishment of this initiative is the development of AOAC Standard Method Performance Requirements (SMPRs) for PFAS in produce, beverages, dairy products, eggs, seafood, meat products, and feed (AOAC SMPR 2023.003). This SMPR provides a target list of 30 PFAS analytes and suggests an additional ten PFAS that could be considered for inclusion in a method and its validation in the various matrix categories. One of the most difficult questions tackled by the AOAC working group during this SMPR development involved consensus on target limits of quantification (LOQs), which was solved by targeting different LOQs for PFOS, PFOA, PFNA, and PFHxS (in EU-regulated matrices vs. other matrices) and for other PFAS. Multiple methods have been submitted in response to the AOAC call for methods, and an expert review panel will soon evaluate their validation data against the SMPR to decide on their potential AOAC Official Method First Action status. The next AOAC PFAS standard development is focused on an SMPR for targeted analysis of PFAS in food packaging and other FCMs. A working group on this topic was launched in September 2024 and started discussing target analytes and matrix categories. After this SMPR development, it is expected to focus on an SMPR for non-targeted analysis to detect and identify unintentionally added or unexpected PFAS in FCMs.

Significance of the Establishment of Metrological Traceability for Testing Histamine in Fish and Fish Products in Southeast Asia

Alleni T. Junsay, Aaron C. Dacuya and Benilda S. Ebarvia
DOST-ITDI, National Metrology Laboratory of the Philippines (NML), Metrology in Chemistry Section, Bicutan, Taguig City

The establishment of metrological traceability for testing histamine in fish and fish products is crucial for ensuring food safety and promoting international trade in Southeast Asia. Histamine, a common cause of foodborne illnesses such as scombroid poisoning, poses significant risks if not properly controlled. This presentation will discuss the importance of traceable measurements in detecting histamine, highlighting its role in harmonizing testing standards across laboratories, meeting global regulatory requirements, and supporting regional exports. Furthermore, it will explore the impact of reliable testing on regulatory enforcement, consumer confidence, and the overall quality of the seafood industry in Southeast Asia. By emphasizing the need for robust metrological infrastructure, the talk aims to provide a framework for improving food safety and trade compliance in the region.

Chemical Migration from Food Packaging: Safety Implications and Current Challenges

Hayati Samsudin

Food Technology Division, School of Industrial Technology, Universiti Sains Malaysia, 11800 USM, Pulau Pinang, Malaysia

Food packaging is essential for the preservation and protection of food products, with quality and safety as primary concerns. Although food safety guidelines frequently prioritize microbiological contamination, the issue of chemical contamination from packaging materials is equally critical and constitutes a serious public health risk. Nonetheless, due to the less noticeable nature of chemical migration from packaging in comparison to microbiological hazards, it is often underestimated. Packaging materials consist of intentionally added substances (IAS) and non-intentionally added substances (NIAS). When these substances transfer into food, they are referred to as migrants. These migrants can either present benefits or risks, dependent upon factors such as chemical composition, physical properties, and tautomerism. Regulatory authorities around the world are taking steps to address these issues, but achieving harmonization in regulatory frameworks remains challenging due to differences in technical capabilities, cultural practices, and levels of public awareness across countries. Despite ongoing efforts, there is no universal solution. Therefore, continued advancement in both regulatory approaches and analytical methods is necessary to effectively analyze and manage chemical migration from food packaging. These advancements must also be tailored to address the specific risks and challenges unique to each nation's needs and requirements.

Limitations of current analytical reference methods to determine vitamins in foods; challenges to support regulatory compliance and nutritional composition data

Erik J.M. Konings
AOAC SEA

Foods are analyzed for their vitamin content to support the verification of regulatory compliance or to generate food composition data. Many international reference methods for the analysis of vitamins in foods originate from the 1990s. Advances in nutrition science, analytical technology and the continuous evolution of statutory regulations necessitate the need of new or supplementary regulatory standards. A recent review of these developments conclude that most current international reference methods are no longer fit-for-purpose to accurately determine vitamin content in foods and food supplements. This paper will give recommendations to consider new and/or updated reference methods for the analysis of all 13 vitamins and carotenoids.

The Microbiologist's Guide to AOAC Method Validation: An Overview of Appendix J

Ms. Erin Crowley
Q Laboratories, USA

This presentation will provide an overview of the AOAC INTERNATIONAL Appendix J Guidelines which are one of the most recognized and respected standards for validation of alternative and proprietary microbiological methods. This standard has evolved over the past several decades to better accommodate the ever-changing world of microbiology and food safety. Since its last approval in 2011, the need for increased guidance on validating new technology principles, emerging pathogens and updated acceptance criteria are needed. Further, the frequent path to validation may involve a harmonized approach to meet both ISO 16140 and AOAC PTM or OMA requirements. The need for revision and potential expansion of the standard will be discussed as well as the value of input from AOAC INTERNATIONAL Sections.

Upcoming collaborative studies at AOACI on contaminants

Erik J.M. Konings
AOAC SEA

Recently AOACI has designated several methods for contaminants as AOAC Official Method First action. This is usually based on Single Lab Validation data. To reach the status of AOAC Official Method Final action, method authors have to demonstrate the method delivers reproducible results when executed by multiple laboratories on the same samples in a collaborative study. This paper gives an overview on the several studies which are in preparation. Labs can indicate their interest to participate in an individual study to AOACI.

Development and Validation of Test Method for Parabens in Sauces

Ma. Rachel V. Parcon, Cyril C. Ramil, Grace V. Amandy, Ruth L. Damian and Alma B. Cruz
Standards and Testing Division, Industrial Technology Development Institute, Department of Science and Technology, Taguig City, Manila, Philippines

Background: Food preservatives like methylparaben (MP), and propylparaben (PP) are utilized in products such as sauces to prevent growth of microorganisms. However, the excessive use can pose potential health risks and product recall due to noncompliance to regulatory limits. Thus, a reliable analytical method is vital for maintaining food quality and safety.

Methods: In this study, a new method was developed and validated for accurate determination of methyl and propyl paraben in sauce matrix using a reversed phase high performance liquid chromatography coupled with a photodiode array detector (HPLC-PDA). Chromatographic separation was achieved using a C18 column and a mobile phase of sodium acetate buffer and acetonitrile. Samples were extracted using an optimized liquid-liquid extraction technique. Subsequently, it was used to accurately determine the content of these preservatives in selected commercial sauce products in the Philippine market.

Results: Method performance characteristics were established for the following parameters: limit of detection and quantification (LOD/LOQ), selectivity, linearity, trueness, and precision. Results of the method development and validation show that the test method is fit for its intended use.

Conclusions: A simple and efficient method was successfully validated for the analysis of different sauce products in the local market. Results show that the products tested conformed to regulations and complied with proper labeling of processed food products.

Salmonella and Staphylococcus aureus: Pathogenicity and food poisoning

Thanh Nguyen-Tuan
Vietnam Center for Food Safety Risk Assessment (VFSA),
National Institute for Food Control (NIFC), Ministry of Health,
Vietnam

According to Vietnam Food Administration (VFA), *Salmonella* and *Staphylococcus aureus* are among the most common and frequent pathogens responsible for food poisoning and infections. Between 2022 and 2024, Vietnam reported numerous cases of food poisoning caused by *Salmonella*, with five large outbreaks resulting in thousands of hospitalizations and many fatalities nationwide. On the other hand, four cases of enterotoxin poisoning of *S. aureus* tended to be concentrated in collective kitchens at schools and industrial parks. The genomic analysis revealed that isolated *Salmonella* strains belonged to common pathogenic serotypes, including Newport, Typhimurium, and Muenster. The virulence factors of *Salmonella* exhibited considerable diversity, characterized by the widespread presence of Salmonella Pathogenicity Islands (SPI) and toxin-regulating genes such as *fyuA*, *ipr2*, *traT*, *astA*, and *terCSP1*. Moreover, most isolated strains demonstrated significant antibiotic resistance, including *mcr3* gene associated with colistin resistance. For *S. aureus*, isolated strains were evaluated for toxin production, antibiotic resistance, and related coding genes. Type A toxin was commonly identified in food poisoning cases attributed to *S. aureus*. Additional virulence factors such as *aur*, *hlg*, *spl*, *luk*, and *sak* genes were found to enhance adherence, invasion, immune evasion, and anti-phagocytosis. *S. aureus* strains displayed strong resistance to antibiotics in the class of macrolide/lincosamide/ streptogramin, tetracycline, and aminoglycoside due to the presence of relevant coding genes. This study provides a comprehensive overview of the food poisoning situation in Vietnam caused by *Salmonella* and *S. aureus*, as well as their detailed genetic characteristics. The findings underscore the urgent need for effective pathogen control measures to ensure food safety and mitigate the burden of foodborne illnesses in Vietnam.

Introduction of analytical standards and certified reference materials (CRMs) for elemental analysis, PFAS, nitrosamine, pesticide residue, quantitative NMR (qNMR), etc.

Toru Miura

FUJIFILM Wako Pure Chemical Corporation

Over the past few decades, we have been supplying analytical reagents including standard products, solvents and HPLC column to the global market. Among them, we supply over 4,000 standard products, and recently focusing on the development of CRM products. In this presentation, we will introduce standard products for elemental analysis, PFAS, nitrosamine, pesticide residue, quantitative NMR (qNMR), and ISO17034 accreditation required for CRM production.

Regulatory analysis of pesticide residues in spices- challenges and way forward

Kaushik Banerjee

ICAR-National Research Centre for Grapes, Pune 412307, INDIA

The international trade of herbs and spices often faces consignment rejections due to detection of pesticide residues at the levels above the regulatory maximum residue limits (MRL). Herbs and spices are typically considered as complex matrices, and food safety evaluation of these commodities requires simultaneous monitoring of multi-class pesticides with high degree of selectivity, sensitivity, accuracy and precision. This presentation will explain the complexity in spice analysis with special focus on the regulatory perspectives of pesticide residue monitoring. The analytical workflows would involve the targeted techniques of gas chromatography tandem mass spectrometry (GC-MS/MS) and liquid chromatography tandem mass spectrometry (LC-MS/MS). Certain matrix-specific problems and their potential solutions will be discussed through the demonstration of case studies.

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