



INTERNATIONAL WORKSHOP FOR MOSH MOAH ANALYSIS IN FOODS

27-28 AUGUST 2024
PALMITIC & OLEIC MEETING ROOM
MPOB HQ BANGI MALAYSIA

Current and Future Analytical Methods for Mineral Oil in Food Supply Chain Control and Mitigation

About the workshop

Mineral oil hydrocarbon (MOH) is an important emerging issue locally and globally. Having excellent miscibility with oils and fats, MOH contaminants could enter the supply chain from many sources and the detection of MOH is important for preventive and mitigation purposes. Despite the potential health concern caused by Mineral Oil Aromatic Hydrocarbons (MOAH) and/or Mineral Oil Saturated Hydrocarbons (MOSH) and these had been regulated by European Commission, accurate quantitation of MOAH and MOSH is still a challenging task. This is especially critical for supply chain control of MOSH/MOAH and these can be transfer down from raw ingredients to final food products. AOAC Southeast Asia Section (AOAC SEA) and Malaysian Palm Oil Board (MPOB) recognized its importance and jointly organized this workshop to increase the state of knowledge on MOSH MOAH analysis for Southeast Asia region.



Register Now

Before 20th Aug 2024

Title	International Workshop for MOSH MOAH Analysis - Current and Future Analytical Methods for Mineral Oil in Food Supply Chain Control and Mitigation
Date	27 – 28 August 2024
Venue	MPOB HQ Bangi Malaysia – Palmitic and Oleic Meeting Room
Fees	S\$250 per pax (Register at the link in the QR)



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Day 1 Program 27 August 2024

Date	Time	Content	Speakers
27 August 2024	8:30 – 9:00	Registration	
	9:00 – 9:30	Opening Speech - AOAC SEA President - Director General of MPOB	
	9:30 – 10:00	Food safety challenges related to palm oil	Dr. Azmil Haizam Ahmad Tarmizi, Malaysian Palm Oil Board
	10:00 – 10:30	What is MOH? How MOH enters the food products	Dr. Luis Rodrigues, MxNS/IKB
		Why MOH analysis matters –from occurrence data to risk assessment	
	10:30 – 10:50	Tea break	
	10:50 – 11:20	Regulatory requirements of MOAH in food	Dr. Luis Rodrigues, MxNS/IKB
		MOSH/MOAH standard method development status including ISO, modified EN method and JRC SOP	
	11:20 – 11:50	An integrated solution for qualitative and quantitative mineral oil analysis using GCxGC-TOFMS/FID	Dr. Sebastiano Panto, LECO Germany
	11:50 – 12:20	MOH in food supply chain – potential risk and mitigation opportunities	YiFan Jiang, Olam Food Ingredients
12:20 – 12:30	Morning speaker token appreciation		
12:30 – 14:00	Lunch break		



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Day 1 Program 27 August 2024

Date	Time	Content	Speakers
27 August 2024	14:00 – 14:30	Mineral oil saturated hydrocarbons (MOSH) and mineral oil aromatic hydrocarbon (MOAH): Emerging contaminants in vegetable oil	Dr. Maznah Zainol, Malaysian Palm Oil Board
	14:30 – 15:00	Analytical challenges of MOH analysis all tips and tricks that you need to know from sample preparation to data interpretation	Dr. Eileen Schultz, IKB Germany (Virtual Live)
	15:00 – 15:30	Analytical strategies to tackle actual difficulties in MOSH/MOAH determination	Dr. Andreas Bruchmann Axel Sembrau Germany (Virtual Live)
	15:30 – 16:00	Streamlined your MOSH MOAH analysis: from fully automated sample preparation to intuitive data analysis	Dr. Christina Liew, GERSTEL LLP Singapore
	16:00 - 16:20	Tea Break	
	16:20-17:00	Quantification of MOAH by number of aromatic rings via GC×GC-FID; characterization of the MOSH and MOAH fraction by GC×GC-FID/MS	Dr. Maurus Biedermann, The Official Food Control Authority of the Canton of Zürich Switzerland (Virtual Live)
	17:00 – 17:15	Importance of sample preparation for MOSH/MOAH analysis (TBC)	Wen Jun Lee, BUCHI Malaysia Sdn. Bhd.
	17:15 – 17:25	Afternoon speaker token appreciation	



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Day 2 Program 28 August 2024

Date	Time	Content	Speakers
28 August 2024	9:00 – 9:05	Day 2 Opening	
	9:05 - 9:25	MOH analysis – Food Manufacturer Perspective: Quality Assurance Center	Poh Fong Chuah, Nestle Singapore
	9:25 – 9:45	The impact of different extraction methods on the MOH results	Dr Meng Fu, MxNS China
	9:45 – 10:30	<u>Round Table Discussion</u> MOH risk management and control from analytical to supply chain	<i>Moderator:</i> YiFan Jiang <i>Panelists:</i> Ipsita Roy, Poh Fong Chuah, Luis Rodrigues
	10:30 – 10:40	Morning speaker token appreciation	
	10:40 – 11:00	Tea break	
	11:00 – 13:00	Technical Workflow Demonstration	
	11:00 – 11:45	<u>Session 1</u> From setup to results: GC×GC-TOFMS/FID system and data analysis with insights on 3-7 ring MOAH quantification	LECO Germany (Classroom)
	11:45 – 13:00	<u>Session 2</u> Sample preparation for MOSH MOAH Analysis <u>Session 3</u> Automated online sample preparation connected to LC-GC-FID for total MOSH/MOAH analysis	MPOB (Laboratory)
	13:00 – 13:15	Closing remarks	
13:15 – 14:30	Networking/ Lunch		



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Location Map



MPOB HQ Bangi is located 10 minutes' drive away (6.5 km) from IOI City Mall Putrajaya, Grab or hotel taxi services are recommended mode of transport.

Google map link

<https://maps.app.goo.gl/kRAP4tbooh34CfAG9>

Accommodation

Several hotels are conveniently located within IOI Resort City as below:

Moxy Putrajaya
Le Meridien Putrajaya
Palm Garden Hotel
Putrajaya Marriott Hotel



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Speakers



Dr Azmil Haizam Ahmad Tarmizi
*Head of Analytical and Quality
Development Unit*
Malaysian Palm Oil Board

Dr Azmil Haizam Ahmad Tarmizi is the Head of Analytical and Quality Development Unit of the Malaysian Palm Oil Board. In 2021, he earned his Doctorate's Degree in Food and Nutritional Sciences from University of Reading and awarded with a Master's Degree in Business Administration from Anglia Ruskin University in 2017. Dr Azmil's research interests are focussing on food quality and safety, frying process, and authenticity of oils and fats. Dr Azmil has published more than 40 index-refereed journals and three book chapters. He is also tasked in the development of Malaysian Standards related to palm oil, Code of Good Milling Practice for Palm Oil Mills, Codex Alimentarius and ISO 17025:2017. Internationally, Dr Azmil has given an honour as a Member of Technical Working Group on 3-MCPDE under the Council of Palm Oil Producing Countries (CPOPC).



Dr. Luis Rodrigues
Chemistry Expert
Mérieux NutriSciences

Dr. Luis Rodrigues is the Chemistry Expert at Mérieux NutriSciences, responsible for providing expertise on mineral oil in MxNS France consulting services, trained by IKB; offering scientific and regulatory support in food and packaging contaminants and standards; delivering consulting services in food and packaging; supporting the commercial team and the customer care team with scientific and regulatory matters



Dr. Sebastiano Panto
*Head of Separation Sciences
Applications*
LECO's European Application and
Technology Centre (EATC), Berlin,
Germany

Sebastiano Panto' has nearly 15 years' experience in gas chromatography and mass spectrometry. He earned his PhD in "Food Chemistry and Safety" from the University of Messina (Italy) in 2014. Since February 2022, he has held the position of "Head of Separation Sciences Applications" at the LECO's European Application and Technology Centre -EATC- in Berlin (Germany).

Previously, from 2016 and 2022, Sebastiano served as an Application Scientist within the same organization, honing his skills and deepening his understanding of comprehensive two-dimensional gas chromatography and Time of Flight Mass spectrometry.



YiFan Jiang
*Regional Regulatory Compliance
Lead for APAC*
olam food ingredients (ofi)

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



In his current role, Sebastiano leads a dedicated team responsible for addressing all SepSci application-related inquiries across the European Union and MENA regions. These responsibilities encompass overseeing sales projects, conducting relevant application work, facilitating customer demonstrations, providing training sessions, and offering application support to collaboration partners.

Sebastiano's primary focus lies in efficiently coordinating these multifaceted activities, ensuring optimal resource allocation, and executing strategic initiatives in a timely manner to achieve organizational objectives.

functions including Quality Assurance and Product Development.



Dr. Maznah Zainol
Senior Research Officer
Malaysian Palm Oil Board

Dr. Maznah Zainol is a dedicated researcher and academic specializing in environmental and analytical chemistry. She holds a Ph.D. in Environmental Chemistry from Universiti Kebangsaan Malaysia (UKM). Dr. Zainol has made significant contributions to the study of contaminants, including pesticides and mineral oils, in various matrices, with a particular focus on palm products. Her work has resulted in numerous publications in leading journals. Currently, she serves as a Senior Research Officer at the Malaysian Palm Oil Board (MPOB), where she focuses on research related to mineral oils, particularly MOSH and MOAH.



Dr. Eileen Schultz
Manager Silliker® Food Science Center
Kirchhoff Institut Berlin

Dr. Eileen Schultz is State-certified food chemist, working at Kirchhoff Institut Berlin (Mérieux NutriSciences) since 2009. Key areas of focus include: Pesticides/Contaminants, Intensive mineral oil analysis since 2012, with high expertise in this field Scientific support to the Customer Care Team regarding Mineral Oils.



Dr. Andreas Bruchmann
Vice President Global Food Solution
Axel Semrau

After studying Analytical Chemistry at the University of Bochum, Andreas Bruchmann joined Axel Semrau in 1992. He worked in different departments before becoming Managing Director in 2010. There he was responsible for the business unit Chromatography, which supplies worldwide automated application solutions for the food and pharmaceutical industry. He was involved in the development of the CHRONECT MOSH/MOAH Workstation from the beginning in 2010. After Axel Semrau has been acquired by Trajan Scientific, Andreas Bruchmann become Vice President Global Food Solution.



Dr. Christina Liew
Regional application chemist
Gerstel LLP Singapore

Christina Liew is currently a regional application chemist at Gerstel LLP Singapore where she provides application and technical expertise support for automated sample preparation solution using GERSTEL MultiPurpose Sampler in various industries. Previously, she gained her interest in analytical chemistry when she worked in an analytical laboratory in the fragrance industry. She then continued to pursue this interest and received her Ph.D. in Analytical Chemistry from National University of Singapore (NUS) which focuses on the miniaturization and automation of sample preparation techniques hyphenated to gas/liquid chromatography-mass



spectrometric system in the analysis of contaminants in various matrices. Since then, she has collaborated and worked in partnership with multiple key users in different industries to develop and automate customised analytical solution to monitor numerous analytes of interest in various matrices.



Dr. Maurus Biedermann
*Laboratory Head, Division
Consumer Goods & Gas
Chromatography*
Official Food Control Authority of
the Canton of Zurich, Switzerland

Maurus Biedermann is a Chemical Analyst and Laboratory Head at the Official Food Control Authority of the Canton of Zürich. He has more than 30 years of experience in food analysis, mainly trace analysis using on-line LC-GC, GC-MS and comprehensive two-dimensional gas chromatography (GC×GC). He was involved in the development of large volume on-column GC injection and the on-line coupling of HPLC with GC. Maurus and co-workers developed methods to detect adulteration of olive oils. He worked on experiments describing the formation of acrylamide during frying and backing processes and investigated on the optimization of cooking potato products in terms of lowest acrylamide formation. Furthermore, during the last decades, the analysis of mineral oil contaminated food was always an important topic. His actual work is related on the characterization and quantification of mineral oil contaminations by GC×GC and comprehensive analysis of migrants from food contact materials. Maurus is teaching classes in gas chromatography, GC injection techniques, and certain applications in Europe and Asia.



Wen Juan Lee
Senior Sales Engineer
BUCHI Malaysia

Wen Juan Lee has been a dedicated Senior Sales Engineer at BUCHI Malaysia since 2015. With a solid foundation in Food Technology and Bioprocess, holding a Bachelor's degree from University Malaysia of Sabah, Ms. Lee is well-equipped with expertise in BUCHI's advanced technologies. She has received extensive regional training in Singapore, Thailand, Korea, and Switzerland, covering a wide range of applications relevant to the Malaysian market.

Throughout her career at BUCHI, Ms. Lee has specialized in serving both upstream and downstream customers in the palm oil industry, providing tailored solutions that meet the unique demands of this sector.



Chuah Poh Fong
Section Head/Lab Manager
Lab Manager Nestle Quality
Assurance Center Singapore

Chuah Poh Fong, holding a BSc in Biochemistry from the University of Malaya (2007), has been with Nestle Quality Assurance Center Singapore (NQAC) since 2010. She began as an Assistant Chemist, then became Team Leader and later Quality Manager, managing ISO17025 certifications. As Nestle Quality Management System (NQMS) Champion, she played a key role in achieving the first NQMS certification in 2014. Since 2015, she has been Section Head/Lab Manager, overseeing various analytical methods and Lean

Dr Meng Fu
China Lab Operation Director
Mérieux NutriSciences (China)

Dr Meng Fu joined Mérieux NutriSciences (China) in 2003, currently served as China Lab Operation Director, responsible for the routine operation of all 7 labs in China.



initiatives. Chuah has also contributed to industry standards through workshops and training, including a presentation on food chain contaminants at Thaifex 2016.



Ipsita Roy
In-charge of Chemical & Biological Processing Division,
Indian Jute Industries' Research Association (IJIRA)

Ipsita Roy is the Quality Manager in Indian Jute Industries' Research Association (IJIRA) since 2015. Her key research areas include MOSH/MOAH analysis of jute bags and packaging materials. Reduction of oil usage in the production of food-grade jute bags, enzymatic treatments and applications in the jute industry, and microbial degradation of aromatic compounds. Through IJIRA, Ipsita works closely with the Indian jute industry and government authorities in the development of research capabilities, industry standards, and certification schemes to meet relevant quality and food safety standards.