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**GOSP**  
GLOBAL QUALITY  
AND STANDARDS PROGRAMME



# ENHANCING THE QUALITY ASSURANCE QUALITY CONTROL PROGRAMME OF RESIDUE TESTING LABORATORIES

August – December 2021| Viet Nam





## CONTENT OF TRAINING SESSIONS

The United Nations Industrial Development Organization (UNIDO) in collaboration with the Ministry of Agriculture and Rural Development of Vietnam (MARD) implement the project **“Increasing quality and standards compliance capacity of Mango value chain in Mekong River Delta”** funded by the Swiss State Secretariat for Economic Affairs (SECO). **One of the objectives is** to upgrade the internal quality control procedures of selected laboratories.

In line with the objectives of the project, a training programme will be conducted for the analysts of the selected laboratories. Due to the pandemic, only virtual training can be performed which will include presentations of theoretical basis of the topic related to:

- Internal quality control of pesticide residue analysis,
- Determination of repeatability and reproducibility of measurement results
- Statistical evaluation and interpretation of measurement results
- Principles and practice of sampling,
- Principles planning risk-based sampling programmes
- Interpretation of pesticide residue analytical results in case of pre-export testing and control of commodities sampled at the local markets.

The lectures presenting the theoretical basis will be presented using power point slides. The training materials will be sent in advance to all nominated analysts. The participants may also ask questions related to the topics in writing.

Participants have been provided with wide range of background technical materials (BD) to provide additional extended information for the topics included in the training programmes and additional methods and guidance documents. They are expected to primarily digest the materials indicated in the programme plus additional ones depending on their interest or related tasks in the laboratory.

The lectures discussing the theoretical basis will be complemented with series of questions designed to test the understanding of the topics of the lectures and the background publications by the participants. The participants will be advised to try to answer them individually.

In view of the different level of understanding of the spoken English language. The analysts of the participating laboratories have been asked to choose the programme either in English with occasional translation when needed (E group) or in English followed by consecutive interpretation (ET group). As result, E group includes SPTC, QUATEST 3 and NPCC and ET group includes DEVOTEC and SIAEP.

The questions raised by the participants will be discussed during consultations as required. Consequently, the programme of the training is tentative and additional sessions will be included as requested by the participants.

To facilitate the understanding of the topics, the lectures and consultations will be recorded, and the recorded materials will be provided for all participants. At the end of the training programme, the participants will get Certificate of Participation. Those participants will be eligible for receiving the certificate who attended the training sessions and consultations and actively participated in the questions- answers exercises and discussion sessions.



## AGENDA

### Training programme on quality assurance quality control in pesticide residue analyses

Month/week	Subject
VIII.1-2	<i>L.1/1 Overview of laboratory procedures E</i>
	Quick questions1
	Self-study BD 3, & 4
	Discussion quick questions 1 E
VIII.3-4	Quick questions1 ET
	Discussion quick questions 1 ET
IX. 1-2	<i>L1/2 Overview of laboratory procedures ET</i>
	Discussion quick questions 1 ET
	Self-study BD 5
IX.3-4	Consultation Q &A, BD 3,4 & 5 E
	Consultation Q &A, BD 3,4 & 5 ET
	Self study BD 5.2,
	<i>L.2/1 Internal quality control – sources of major errors. E</i>
	Quick questions 2
	<i>L.2/2 Internal quality control – sources of major errors. ET</i>
	Quick questions 2-ET
	<i>Self study BD 1</i>
X.1-2	<i>L3/1 Statistical evaluation of measurement results . E</i>
	Quick questions 3
	Consultation Q &A on BD 5.2
	<i>L3/2 Statistical evaluation of measurement results . ET</i>
	Consultation Q &A on BD 5.2 ET

X.3-4	L4/1 Estimation of uncertainty of measurements E
	Self-study BD 6
	Quick questions 4 E
	Consultation Q&A on BD 5.2
XI. 1-2	L.4.2 1 Estimation of uncertainty of measurements ET
	Quick questions 4 E
	Consultation Q & A on BD 5.2
XI. 3-4	L5/1 Principles and practices of method validation E
	L5/2 Principles and practices of method validation ET
	Quick questions 5
	Self-study BD 6 & 8
	L6.1 Interpretation of measurement results versus MRLs
	L6.2 Interpretation of measurement results versus MRLs
	Quick questions 6
	Consultation Q & A on BD 6 & 8
XII.1-2	L7.1 Principles of planning risk-based monitoring programmes E
	L7.2 Principles of planning risk-based monitoring programmes ET
	Quick questions 7
XII.3-4	Final consultation Q & A E
	Final consultation Q & A ET

**Notes:**

E: English programme; ET: English with translation

BS: background document (number indicate the serial number of the document sent to the labs)

BD5.2 indicated the subchapter of document 5

SPTC: South Pesticide Testing Centre of Plant Protection Department, MARD

QUATEST 3: Quality Assurance and Testing Center of STAMEQ, MOST

NPCC: Northern Pesticide Testing Center of Plant Protection Department, MARD

DEVOTEC: Dong Thap Verification and Testing Center

SIAEP: South Institute of Agriculture Engineering and Post-Harvest Technology, MARD



## LECTURER'S BIOGRAPHIES



### Prof. Dr. Árpád Ambrus

Prof. Dr. Árpád Ambrus is chemical engineer (MSc), Candidate of Chemical Sciences, honorary university professor. He is an IUPAC Fellow, member of the Food Safety Subcommittee of the Hungarian Academy of Science (2008-), JMPR FAO Panel (1973-2015). He received the Silver Cross of Merit award, the IUPAC International Award for Advances in Harmonized Approaches to Crop Protection Chemistry. He chaired the CCMAS and represented Hungary in the CCPR for 14 years. He was the Honorary Scientist of the Agricultural Academy of Korea for 5 years and was posted to influential international assignments with FAO during 1984 to 1990 and the International Atomic Energy Agency during 1998 to 2004.

Dr. Ambrus teaches at the Doctoral Schools of the St. Steven University in Budapest and University of Debrecen. During his carrier, he published over 100 peer-reviewed scientific papers and 10 books, supervised the studies of 7 PhD aspirants, managed the Hungarian Pesticide Analytical Laboratories, and the pesticide programme of the FAO/IAEA Training and Reference Centre, was the deputy director general of Hungarian Food Safety Office, and retired as chief scientific advisor of the National Food Chain Safety Office in 2014. At present, he is UNIDO's international expert on pesticide management and testing.

## CONTRIBUTORS' BIOGRAPHIES



### Mai Thanh Liem

Mai Thanh Liem is an expert in Chemical Engineering, trainer and advisor to governments and international organizations. Liem has more than 20 years of experience in establishing develop and operate laboratory. He is serving as hardlines & electrical wireless general manager cum chemical lab at Intertek Vietnam. Ltd. His main responsibility involves: Laboratory Operation, Chemical test (RSL, REACH, Food, agriculture, pesticide ...), toy testing, furniture lab control outdoor, indoor and office product for EU and US market.

He worked as a technician of Southern Pesticide Control Centre – Ministry of Ministry of Agriculture and Rural Development. He also used to work at SGS VIETNAM from 2003-2010. At present, he is UNIDO's national expert on lab quality management.



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## Phan Van Tuong

Mr. Phan van Tuong is a Doctor (PhD) in plant protection. He used to be the Director of the Southern Pesticide Control and Testing Center (SPCTC) under the Plant Protection Department (PPD) of MARD. He has more than 36 years of experience in the field of pesticides management. He is also a member of the Technical Committee of PPD for bio- efficacy evaluation of pesticides for registration.

After retiring, he worked as an adviser of the Vietnam Sustainable Agriculture Transformation project (VNSAT) from 2016 -2017, and as Executive Director of CropLife Vietnam from 2017 – 2018. At present, he is UNIDO's national expert on pesticide management.



## Nguyen Duc Duy

He got PhD degree in Denmark with major in Chemistry. He has worked in analytical laboratory for more than 10 years, mainly focused on testing of apparel, footwear, toys at commercial laboratory. He has more than 5 years of experience in teaching and supervising students in their thesis at University of Science, Ho Chi Minh City. At present, he is providing support to facilitate the training programme as an interpreter cum assistant trainer.