

BOKU
University of Natural Resources and Applied
Life Sciences
Vienna 2013

*Reference Materials
and Method Validation
in Food Safety Assurance*

Dr. Roland Ernest Poms

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ICC-International Association
for Cereal Science and Technology

MoniQA

International Association:
Monitoring and Quality Assurance
in the Total Food Supply Chain

Introduction: Dr. Roland Ernest Poms



Nationality: **Austria**

Education: **MSc** Food Technology and Biotechnology, BOKU, Vienna, Austria, and University of Minnesota, St. Paul, USA

PhD, Food Technology and Biotechnology, BOKU, Vienna, Austria

Post Doc in Food Safety, JRC, European Commission, Ispra, Italy

Prof., Honorary Professor in Food Safety Assessment, BOKU, Vienna, Austria

Areas:

Food Microbiology

GMOs and Molecular Biology

Food Allergens and Immunochemistry

Cereal Science and Technology

Aim of the Workshop/Lecture

The aim of the lecture/workshop on „Reference materials and method validation in food safety assurance” is to describe the problems and challenges involved in the international comparability and validity of analytical results in the **assurance of food safety and quality**. On the basis of practical examples the focus will be on current hot topics, such as **mycotoxins, food allergens, pathogenic micro-organisms, GMOs, etc.**, the analytical possibilities (including rapid methods), and the corresponding regulations. Additionally, an overview of international standardization bodies and examples of **international validation studies** will be given.

Content of the Workshop/Lecture (1)

- Introduction
- Current hot topics in food safety in the EU and globally – legal and economical background
- From risk assessment to risk management – the European example
- Trend towards rapid methods – involved challenges
- Test kits and other “rapid” analytical technologies
 - ELISA, Dipstick Assay/Lateral Flow Device (LFD)
 - Fluorescence Polarisation
 - Biosensors/Lab on a chip
 - PCR + gel electrophoresis
 - PCR-ELISA
 - Real-Time PCR

Content of the Workshop/Lecture (2)

- Global trade and the need for validated methods
- Requirements for reference methods and reference materials
- Validation of analytical methods and required parameters
- International Standards and Standardisation/Validation Bodies
- Case studies
 - ISO/AOAC/IUPAC harmonised protocol
 - validation study of peanut allergen ELISA
 - production of reference materials for food allergen analysis
- Other international efforts
 - EU projects in the food safety area
 - CEN working groups
 - IAM (Inter Agency Meeting)

Organisation (1)

- Lectures will be blocked (25-29 November 2013)
- Power Point Presentations plus some demonstration material
- Powerpoints are available at BOKUonline.
- Printed booklets can be purchased for € 15.-
- Excursion and invited speakers from industry and research
 - BioPure
 - RomerLabs
 - IFA Tulln
 - Quantas
- 3 ECTS from BOKU for registered students after an oral exam after completion of the lectures

Organisation (2)



Location:

BOKU – University of Natural Resources and Applied Life Sciences Vienna
Department of Food Science and Technology, Muthgasse 18, A-1190 Vienna

Dates:

- | | | |
|------------------------------|-------------|--|
| 25 November 2013 (Monday) | 13:30-17:00 | Food safety in a global context |
| 26 November 2013 (Tuesday) | 13:30-17:00 | Analytical challenges in food safety |
| 27 November 2013 (Wednesday) | 13:30-17:00 | <u>Excursion:</u> IFA-Tulln, Christian Doppler Laboratory, Romer Labs, Biopure, Quantas |
| 28 November 2013 (Thursday) | 13:30-17:00 | Towards reference materials for food allergens, method validation criteria |
| 29 November 2013 (Friday) | 13:30-17:00 | Terms and definitions, AOAC harmonized protocol |

Organisation (3)



Excursion:

IFA-Tulln, Center for Analytical Chemistry, Department for Agrobiotechnology,
Konrad Lorenz Strasse 20, A-3430 Tulln, Austria

- | | |
|---------------|---|
| 14:00 -14:30 | Antibody development - Sabine Baumgartner |
| 14:30 -15:00 | Food Allergens and analytical methods - Elisabeth Halbmayr-Jech and Lukas Frank |
| 15:00 -15:30 | Mycotoxins and GMOs - analytical methods (PCR, LFD, HPLC, LCMSMS) - Vera Traar |
| 15:30 - 16:00 | Reference Materials - Georg Häubl |
| 16:00-17:00 | Visit to the laboratories and demonstration of test kits |

In cooperation with MoniQA Association



Monitoring and **MoniQA** Quality Assurance

Monitoring and Quality Assurance in the Food Supply Chain

“Working for safer foods by harmonising worldwide food quality and safety monitoring and control strategies.”

Contract N0. FOOD-CT-2006-36337

MoniQA

www.moniqa.org



SIXTH FRAMEWORK PROGRAMME



MoniQA Association



MoniQA Global Food Safety Network

...providing expertise and services for effective food safety management..

...for food manufacturers, food retailers, international trade, food analytical laboratories, food control and regulatory bodies

- Non profit-distributing association
- Established in July 2011
- Membership based
- Secretariat at ICC HQ in Vienna, Austria

Research

Industry

Consumers

Policy
Makers

Organisation (3)

	BOKU				26.03.2007
Reference Materials and Method Validation in Food Safety Assurance					
Dr. Roland Ernest Poms					
No	Name	First name	Course	Semester	Email address
1					
2					
3					
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MoniQA

Any questions?

www.icc.or.at

www.moniqa.org

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