

# Update on Pesticide Residues Analytical Tools to Improve Food Control



## INTI-Workshop

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## CVUA Freiburg

(State Institute for Chemical and Veterinary Analysis of Food)



European Union Reference Laboratory (EU-RL) for dioxins and PCBs in feed and food

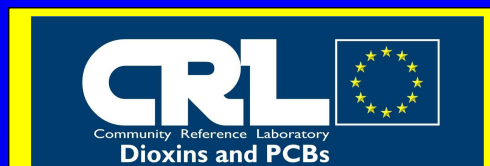
EU-RL for pesticides in food of animal origin and commodities with high fat content

WHO Reference Laboratory for dioxins, PCBs and halogenated pesticides (POPs) in human milk

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# CRL: Community Reference Laboratory

new name (2010):  
**EU Reference Laboratory (EU-RL)**



European Union Reference Laboratory  
 for dioxins and PCBs in feed and food



European Union Reference Laboratory  
 for pesticides in food of animal origin  
 and commodities with high fat content

## Organisation of CVUA Freiburg

1	2	3	4	5	6	7
GC	Water (1)	<b>Pesticides (1) *</b>	Wine	Diet food	Meat (1)	Pathology
<b>GC-MS, HPLC-MS</b>	Water (2)	<b>Pesticides (2) *</b>	Liquors, beer	Genetic. mod. Food	Meat (2)	Bacteriology
HPLC	Environm. Contam.	<b>Vet. Drugs (1)</b>	Honey, sweets	Oils, fat	Fish	Virology
Heavy metals	Consumer goods	<b>Vet. Drugs (2)</b>	Radio isotopes	Vegetables	Milk (1)	Serology
Toxicology	Cosmetics	<b>Dioxins *</b>	Stable isotopes	Molecular biology	Milk (2)	Bees diseases
					Microbiology	Fish diseases
					Immunology	Poultry diseases

\*) EU-RL

## Department „Residues and Contaminants“

Laboratory		European Union Reference laboratory (EU-RL)	WHO-Reference laboratory
Veterinary drugs, national residue control plan	RegBez Freiburg, Tübingen		
Pesticides in food of animal origin	central in BW	EU	global
Dioxins	central in BW for food and feed	EU	global

Baden-Württemberg

EU Member States

Signatories of Stockholm Convention

## Routine Workload of the Residue Department

- Official food control (residues in food of animal origin)  
about 1000 samples
- Official feed control (dioxins)  
about 200 samples
- National Residue Control Plan  
about 2000 samples with physical-chemical methods  
(3500 inhibitor tests are performed in department 7)
- National and EU Monitoring Programs  
about 100 samples

# Content of the Presentation

European legislation: pesticides

Pesticides: validation of analytical methodology

Analysing pesticides (food of animal origin)

EUPTs: The General Protocol

EUPT AO: Prepration of meat test materials

EUPT AO: Prepration of egg test materials

European legislation: veterinary drug residues

Veterinary drug residues: validation

Veterinary drugs: methods

## Two sets of AQC Procedures

1. Method Validation and Quality Control  
Procedures for Pesticide Residues Analysis  
in Feed and Food  
(Document No. SANCO/10684/2009)
2. Commission Decision 2002/657/EC  
Implements Council Directive 96/23/EC on  
measures to monitor certain substances and  
residues thereof in live animals and animal  
products

## Applicability

1. Quality Control Procedures for Pesticide  
(Document No. SANCO/10684/2009):  
Pesticides in all feed and food products

2. Commission Decision 2002/657/EC:  
Organic residues and contaminants:

veterinary drugs, OCs, OPs, carbamates and  
pyrethroids, dioxins, elements, mycotoxins and dyes

in meat, fish, eggs, milk and honey  
for samples taken pursuant Directive 96/23/EC

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## Differences

### 2002/657/EC <-> AQC Guidelines

- 2002/657/EC: comprehensive validation of method before use required; few requirements for continuous quality control after introduction at use in routine
- Pesticide Guidelines: few requirements for validation before use; comprehensive requirements of continuous quality control during use

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## Conclusion

- Serious concern of all participants being torn between requirements of 2002/657 and pesticides AQC procedures
- **Favourite option: Separation of requirements for veterinary drug residue analysis (in accordance with 2002/657) and for analysis of pesticides (and contaminants)**  
*(might be result of revision of 96/23/EC regulation)*

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## Conclusion

- AQC Procedures may be adopted in accordance with Art. 28 (Methods of Analysis) of Regulation (EC) No 396/2005 of the European Parliament and of the Council on maximum residue levels of pesticides in or on food and feed of plant and animal origin in order to increase binding character.
- Art. 5 of SANCO/10684/2009 attends in this direction
- Agreement: At the moment inspectors of the Federal Veterinarian Office (FVO) will accept if pesticides in food of animal origin are validated either according the AQC procedures or CD 2002/657/EC
- But: Problematic are substances used as veterinary drugs

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